

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 08:32:29 ON 26 JUL 2009
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 24 JUL 2009 HIGHEST RN 1168220-55-0  
DICTIONARY FILE UPDATES: 24 JUL 2009 HIGHEST RN 1168220-55-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

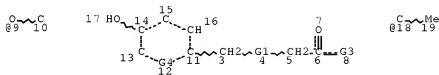
ISCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

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=> d que stat l18
L12 STR
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REP G1=(0-1) S
VAR G3=9/N
VAR G4=CH/18
NODE ATTRIBUTES:
NSPEC IS RC AT 10
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 17
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STEREO ATTRIBUTES: NONE
L13 SCR 2026 OR 1016 OR 1918 OR 1929 OR 2040
L16 4329 SEA FILE=REGISTRY SSS FUL L12 NOT L13
L18 3907 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L16 NOT PMS/CI
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(FILE 'HOME' ENTERED AT 07:51:43 ON 26 JUL 2009)

FILE 'HCAPLUS' ENTERED AT 07:51:59 ON 26 JUL 2009

July 26, 2009

10/586,707

2

L1 1 SEA SPE=ON ABB=ON PLU=ON WO2005-EP50140/AP  
D SCA  
SEL RN

FILE 'REGISTRY' ENTERED AT 07:52:36 ON 26 JUL 2009

L2 4 SEA SPE=ON ABB=ON PLU=ON (1592-23-0/BI OR 23128-74-7/B  
I OR 6683-19-8/BI OR 70198-29-7/BI)

FILE 'LREGISTRY' ENTERED AT 07:52:46 ON 26 JUL 2009

L3 STR

FILE 'REGISTRY' ENTERED AT 07:55:17 ON 26 JUL 2009

L4 STR L3

FILE 'REGISTRY' ENTERED AT 07:56:19 ON 26 JUL 2009

L5 1 SEA SSS SAM L4  
D SCA

FILE 'LREGISTRY' ENTERED AT 07:56:47 ON 26 JUL 2009

L6 STR L4

FILE 'REGISTRY' ENTERED AT 07:58:10 ON 26 JUL 2009

L7 1 SEA SSS SAM L6  
D SCA

FILE 'LREGISTRY' ENTERED AT 07:59:59 ON 26 JUL 2009

L8 STR L6

FILE 'REGISTRY' ENTERED AT 08:02:52 ON 26 JUL 2009

L9 0 SEA SSS SAM L8

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L10 STR L6

FILE 'REGISTRY' ENTERED AT 08:07:30 ON 26 JUL 2009

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D SCA

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L12 STR L10

L13 SCR 2026 OR 2016 OR 1918 OR 1929 OR 2040

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L14 13 SEA SSS SAM L12 NOT L13  
D L10

L15 3 SEA SSS SAM L10 NOT L13

L16 4329 SEA SSS FUL L12 NOT L13  
SAV L16 FAN707/A

L17 2 SEA SPE=ON ABB=ON PLU=ON L2 AND L16

L18 3907 SEA SPE=ON ABB=ON PLU=ON L16 NOT PMS/CI  
D RN L17 1-2

FILE 'HCAPLUS' ENTERED AT 08:16:45 ON 26 JUL 2009

L19 QUE SPE=ON ABB=ON PLU=ON ADDITIVE? OR ADJUVANT? OR  
AUXILIAR? OR MODIFIER?

L20 481 SEA SPE=ON ABB=ON PLU=ON L18(L) L19

L21 7057 SEA SPE=ON ABB=ON PLU=ON L17

L22 285 SEA SPE=ON ABB=ON PLU=ON L20 AND L21

L23 QUE SPE=ON ABB=ON PLU=ON (REDUC? OR DIMINISH? OR  
DECREAS? OR LOW OR LOWER?) (2A) DUST

L24 3 SEA SPE=ON ABB=ON PLU=ON L20 AND L23  
L25 QUE SPE=ON ABB=ON PLU=ON MIX### OR MIXTURE OR BLEND  
OR FORMULAT?  
L26 3380 SEA SPE=ON ABB=ON PLU=ON L21 AND L25  
L27 QUE SPE=ON ABB=ON PLU=ON POLYMER OR COPOLYMER OR  
HOMOPOLYMER OR TERPOLYMER OR RESIN  
L28 2787 SEA SPE=ON ABB=ON PLU=ON L26 AND L27  
L29 2 SEA SPE=ON ABB=ON PLU=ON L24 NOT L1  
D AN 1-2  
L30 QUE SPE=ON ABB=ON PLU=ON GRAIN# OR GRANUL? OR POWDER?  
OR SOOT? OR SMUT? OR FINES# OR DUST  
L31 378 SEA SPE=ON ABB=ON PLU=ON L28 AND L30  
L32 QUE SPE=ON ABB=ON PLU=ON L27(3A)L30  
L33 90 SEA SPE=ON ABB=ON PLU=ON L31 AND L32  
D KWIC 1-2  
L34 QUE SPE=ON ABB=ON PLU=ON L27(3A)L19  
L35 18 SEA SPE=ON ABB=ON PLU=ON L33 AND L34  
L36 204 SEA SPE=ON ABB=ON PLU=ON L20 AND L34  
L37 17 SEA SPE=ON ABB=ON PLU=ON L36 AND L32  
L38 24 SEA SPE=ON ABB=ON PLU=ON L35 OR L37  
L39 23 SEA SPE=ON ABB=ON PLU=ON L38 NOT L24

=> fil heap

FILE 'HCAPLUS' ENTERED AT 08:32:38 ON 26 JUL 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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FILE COVERS 1907 - 26 Jul 2009 VOL 151 ISS 5

FILE LAST UPDATED: 24 Jul 2009 (20090724/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAPlus family of databases will soon be updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

=> d ibib abs hitstr hitind 124 1-3

L24 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:696969 HCAPLUS Full-text  
 DOCUMENT NUMBER: 143:154325  
 TITLE: Method for continuous production of uniform  
 low-dust granules from polymer  
 additives  
 INVENTOR(S): Breitenstein, Benjamin; Gfroerer, Thomas Georg;  
 Waldner, Rolf; Lutz, Pierre  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005071008	A1	20050804	WO 2005-EP50140	20050114
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2553012	A1	20050804	CA 2005-2553012	20050114
EP 1706451	A1	20061004	EP 2005-707771	20050114
EP 1706451	B1	20070509		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1910227	A	20070207	CN 2005-80003063	20050114
AT 361943	T	20070615	AT 2005-707771	20050114
BR 2005007081	A	20070619	BR 2005-7081	20050114
JP 2007524740	T	20070830	JP 2006-550159	20050114
ES 2285680	T3	20071116	ES 2005-707771	20050114

ZA 2006005545	A	20071128	ZA 2006-5545	14
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KR 2006127890	A	20061213	KR 2006-714623	200607
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MX 2006008280	A	20060929	MX 2006-8280	200607
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IN 2006CN02730	A	20070608	IN 2006-CN2730	200607
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NO 2006003740	A	20061020	NO 2006-3740	200608
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PRIORITY APPLN. INFO.:			EP 2004-100246	A
				200401
				23
			WO 2005-EP50140	W
				200501
				14

AB The granule-forming polymer additives are mixed together with commonly used polymer processing additives, the mixture is converted into a workable mass and pressed through an orifice. The pre-shaped strand-like extrudate is cooled and, while still in a workable state, formed into granules by rolling, impressing, cooling and sieving through sieve granulator. The granule forming polymer additives of this method are substituted phenolic derivs. of Irganox 1010 or Irganox 1098 additive type.

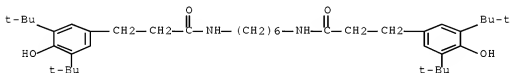
IT 23128-74-7, Irganox 1098

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(in mixture with Irganox 1010; low-dust uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)

RN 23128-74-7 HCAPLUS

CN Benzenepropanamide, N,N'-1,6-hexanediylbis[3,5-bis(1,1-dimethylethyl)-4-hydroxy- (CA INDEX NAME)]



IT 6683-19-8, Irganox 1010

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(in mixture with Irganox 1098; low-dust uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)

July 26, 2009

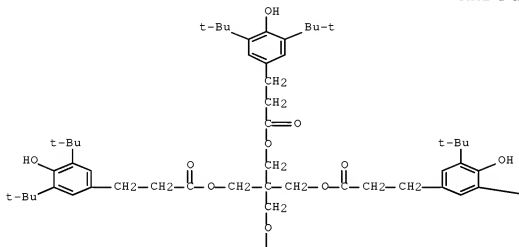
10/586,707

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RN 6683-19-8 HCAPLUS

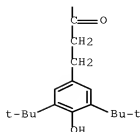
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy)methyl]-1,3-propanediyl] ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

— Bu-t



- IC ICM C08K005-13  
 ICS C08K003-00; C08K005-00; C08K007-16; C08K013-02; B01J002-00; B01J002-22; B01J002-24
- CC 37-6 (Plastics Manufacture and Processing)
- ST polymer additive low dust granulation phenolic granule forming aid
- IT Extrusion of plastics and rubbers  
 Granulation  
 (low-dust uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- IT Phenols, uses  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (substituted, derivs.; low-dust uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- IT 23128-74-7, Irganox 1098  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (in mixture with Irganox 1010; low-dust uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- IT 6683-19-8, Irganox 1010  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (in mixture with Irganox 1098; low-dust uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- IT 1592-23-0, Calcium stearate 70198-29-7, Tinuvin 622  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (mix with Irganox 1010; low-dust uniform granulation of polymer additives using granule forming phenolic derivs. by single orifice extrusion, squeeze rolling, granule impressing, cooling, comminuting and sieving)
- REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN

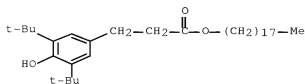
## THE RE FORMAT

L24 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1997:102103 HCAPLUS Full-text  
 DOCUMENT NUMBER: 126:186869  
 ORIGINAL REFERENCE NO.: 126:36079a,36082a  
 TITLE: Low-dust granules of plastic  
 additives containing calcium stearate and their  
 manufacture  
 INVENTOR(S): Thibaut, Daniel; Breitenstein, Benjamin;  
 Kirchberger, Linda  
 PATENT ASSIGNEE(S): Ciba-Geigy Corporation, USA  
 SOURCE: U.S., 23 pp., Cont.-in-part of U.S. Ser. No.  
 365,262, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
US 5597857	A	19970128	US 1995-420388	199504 12
EP 719824	A2	19960703	EP 1995-810801	199512 18
EP 719824	A3	19980225		
EP 719824	B1	20010627		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, PT, SE				
AT 202586	T	20010715	AT 1995-810801	199512 18
ES 2158063	T3	20010901	ES 1995-810801	199512 18
AU 9540613	A	19960704	AU 1995-40613	199512 21
AU 705017	B2	19990513		
CA 2166022	A1	19960629	CA 1995-2166022	199512 22
FI 9506206	A	19960629	FI 1995-6206	199512 22
JP 08333477	A	19961217	JP 1995-351662	199512 26
JP 4061560	B2	20080319		
IN 194371	A1	20041030	IN 1995-DE2407	199512 26
NO 9505307	A	19960701	NO 1995-5307	199512 27
NO 309724	B1	20010319		
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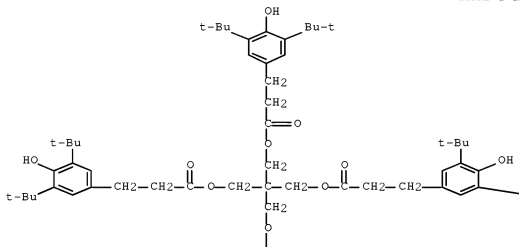
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CN 1132763	A	19961009	CN 1995-120114	
				199512 27
CN 100360598	C	20080109		
BR 9506100	A	19971223	BR 1995-6100	
				199512 27
CZ 289892	B6	20020417	CZ 1995-3475	
				199512 27
SK 283951	B6	20040504	SK 1995-1653	
				199512 27
RU 2151782	C1	20000627	RU 1995-122533	
				199512 28
JP 2007314810	A	20071206	JP 2007-229181	
				200709 04
PRIORITY APPLN. INFO.:			US 1994-365262	B2 199412 28
			US 1995-420388	A 199504 12
			JP 1995-351662	A3 199512 26
AB	Low-dust granules of plastic additives containing $\geq 10\%$ Ca stearate (I), where the water content of the calcium stearate is less than 2%, have a particle size distribution (ISO 3435) 1-10 mm, loose bulk d. >400 g/l, and a flowability (DIN 53492) <15 s (tR25). These granules are manufactured by heating the additive mixture until $\geq 80\%$ of I is melted, extruding the melt through a nozzle with hole diameter 1-10 mm, and forming granules.			
IT	2082-79-3, Irganox 1076 6683-19-8, Irganox 1010 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses) (low-dust granules of plastic additives containing calcium stearate)			
RN	2082-79-3 HCAPLUS			
CN	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)			



RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

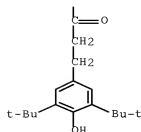
PAGE 1-A



PAGE 1-B

— Bu-t

PAGE 2-A



- IC ICM C08K005-09  
ICS C09K015-32
- INCL 524400000
- CC 37-6 (Plastics Manufacture and Processing)
- IT Granulation  
(extrusion-; low-dust granules of plastic additives containing calcium stearate)
- IT Amines, uses  
Phenols, uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(hindered; low-dust granules of plastic additives containing calcium stearate)
- IT Antiblocking agents  
Antistatic agents  
Fireproofing agents  
Light stabilizers  
Lubricants  
Pigments, nonbiological  
UV stabilizers  
(low-dust granules of plastic additives containing calcium stearate)
- IT Oxides (inorganic), uses  
Soaps  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(low-dust granules of plastic additives containing calcium stearate)
- IT Esters, uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(thio; low-dust granules of plastic additives containing calcium stearate)
- IT 89421-57-8, Irganox B 315  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(Irganox B 315; low-dust granules of plastic additives containing calcium stearate)
- IT 1592-23-0, Calcium stearate  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(Radiastar 1060; low-dust granules of plastic additives containing calcium stearate)
- IT 2082-79-3, Irganox 1076 6683-19-8, Irganox 1010 31570-04-4, Irgafos 168  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or

chemical process); PROC (Process); USES (Uses)  
 (low-dust granules of plastic  
 additives containing calcium stearate)  
 IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene  
 RL: POF (Polymer in formulation); USES (Uses)  
 (low-dust granules of plastic additives  
 containing calcium stearate)  
 OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS  
 RECORD (6 CITINGS)  
 REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L24 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1996:529489 HCAPLUS Full-text  
 DOCUMENT NUMBER: 125:169653  
 ORIGINAL REFERENCE NO.: 125:31783a,31786a  
 TITLE: Low-dust granules of plastic  
 additives containing calcium stearate, their  
 preparation and their use  
 INVENTOR(S): Thibaut, Daniel; Breitenstein, Benjamin;  
 Kirchberger, Linda  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Eur. Pat. Appl., 36 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 719824	A2	19960703	EP 1995-810801	199512 18
EP 719824	A3	19980225		
EP 719824	B1	20010627		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, PT, SE				
US 5597857	A	19970128	US 1995-420388	199504 12
PRIORITY APPLN. INFO.:			US 1994-365262	A 199412 28
			US 1995-420388	A 199504 12

AB Low-dust granules of plastic additives, comprising  $\geq 10\%$  Ca stearate (I), where the water content of the I is  $< 2\%$ , having particle size distribution (ISO 3435) 1-10 mm, loose bulk d.  $> 400$  g/L, and flowability (DIN 53492)  $< 15$  s (tR25), are obtained for the stabilization of organic polymers. The granules may incorporate a sterically hindered phenol and a phosphite and are produced by warming a mixture of additives containing 10-100% I until  $\geq 80\%$  of the I is melted, pressing the melt through 1-10 mm-diam holes or nozzles, and forming granules from the extrudate in the plastic state. An example was given which incorporated granulated extruded I and Irganox B 215 in polypropylene; the

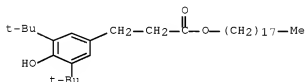
yellowness index of the stabilized polymer was less after repeated processing at 260° than a composition using powdered I.

IT 2082-79-3, Irganox 1076 6683-19-8, Irganox 1010

RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
(low-dust granules of plastic additives containing calcium stearate)

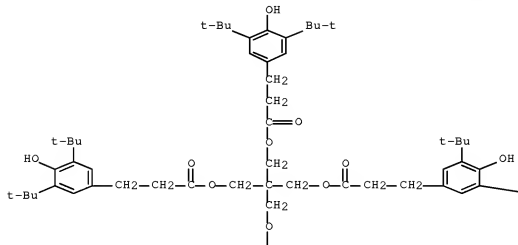
RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

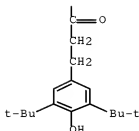


PAGE 1-A

PAGE 1-B

—Bu-t

PAGE 2-A



- IC ICM C08K005-00  
ICS C08K003-00
- ICI C08K005-00, C08K005-098, C08K005-13, C08K005-3435, C08K005-52;  
C08K003-00, C08K003-22, C08K003-26, C08K003-34
- CC 37-6 (Plastics Manufacture and Processing)
- IT Antioxidants  
(low-dust granules of plastic additives  
containing calcium stearate)
- IT Light stabilizers  
(UV, low-dust granules of plastic additives  
containing calcium stearate)
- IT 1592-23-0, Calcium stearate  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(Radiastar 1060; low-dust granules of plastic  
additives containing calcium stearate)
- IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene  
RL: POF (Polymer in formulation); USES (Uses)  
(low-dust granules of additives containing  
calcium stearate for polyolefins)
- IT 2082-79-3, Irganox 1076 6683-19-8, Irganox  
1010 31570-04-4, Irgafos 168 89421-57-8, Irganox B 215  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(low-dust granules of plastic  
additives containing calcium stearate)

July 26, 2009

10/586,707

15

OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS  
RECORD (11 CITINGS)

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L39 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2009:375438 HCAPLUS Full-text  
DOCUMENT NUMBER: 150:424240  
TITLE: Manufacture method of universal white  
masterbatch  
INVENTOR(S): Shi, Hangwu; Zhu, Xihua; Zhao, Maohua; Hong,  
Yin; Chen, Jianguo  
PATENT ASSIGNEE(S): Ningbo Colour Master Batch Co., Ltd., Peop. Rep.  
China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
6pp.  
CODEN: CNXKEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101392078	A	20090325	CN 2008-10122122	200810 28
PRIORITY APPLN. INFO.:			CN 2008-10122122	200810 28

AB The title white masterbatch is manufactured from (by weight%) carrier resin (one or two of polyethylene-ethylene/butylene-styrene copolymer or ethylene-vinyl acetate copolymer) 15-20, pigment (one or two of rutile-type titanium dioxide or anatase-type titanium dioxide) 40-80, dispersant (one or two of polyethylene wax, oxidized polyethylene wax, or ethylene-vinyl acetate copolymer wax) 5-10, additive (one or two of stearate or ethylenebis(stearamide)) 0-5, thermal stabilizer (one of phenols or phosphites) 0-2, and filler (one or more of calcium carbonate, talcum powder, or wollastonite) 0-40. The manufacture method comprises preparing starting material at ratio, mixing under low speed for 0-10 min, mixing under high speed for 5-25 min, melting and mixing with an extruder while controlling the temperature at 190-220° and rotation speed of 80-400 r/min to uniformly disperse the pigment in carrier resin, granulating, drying, and packaging. The obtained white masterbatch has good dispersibility, good impact resistance, and high concentration, and can be used in different materials. The manufacture method is simple and economic, and has wide application.

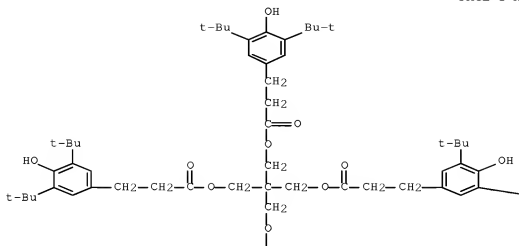
IT 6683-19-8

RL: MOA (Modifier or additive use); USES (Uses)  
(manufacture method of universal white masterbatch)

RN 6683-19-8 HCAPLUS

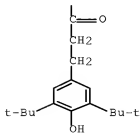
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis([3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy)methyl]-1,3-propanediyl] ester (CA INDEX NAME)

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PAGE 1-B

PAGE 2-A



CC 37-6 (Plastics Manufacture and Processing)  
 IT 557-05-1, Zinc stearate 6683-19-8 9002-88-4  
 13983-17-0, Wollastonite



RL: MOA (Modifier or additive use); USES (Uses)  
 (manufacture method of universal white masterbatch)  
 IT 24937-78-8, Ethylene-vinyl acetate copolymer  
 106107-54-4D, Butadiene-styrene block copolymer,  
 hydrogenated  
 RL: POF (Polymer in formulation); TEM (Technical or engineered  
 material use); USES (Uses)  
 (manufacture method of universal white masterbatch)  
 IT 14807-96-6, Talcum, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (powder; manufacture method of universal white masterbatch)

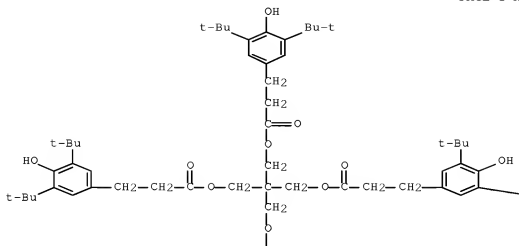
L39 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2009 ACS ON STN  
 ACCESSION NUMBER: 2007:1442492 HCAPLUS Full-text  
 DOCUMENT NUMBER: 148:55934  
 TITLE: Producing polypropylene-based composition  
 granulate useful for moldability  
 additives  
 INVENTOR(S): Minakami, Shigeo; Ryosho, Yuji; Shimizu, Takeshi  
 PATENT ASSIGNEE(S): Japan Polypro Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 28pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007326898	A	20071220	JP 2006-157135	20060606
PRIORITY APPLN. INFO.:				20060606
				06

AB The composition containing (A) 70-99 parts crystallizable polypropylene or propylene block copolymer prepared by random copolymerization of propylene and ethylene in the presence of crystallizable polypropylene having MFR >120 g/10 min, and (B) 1-30 parts ethylene- $\alpha$ -olefin copolymer, wherein the composition has MFR 50-120 g/10 min, and is cut under water to give granulate. Thus, propylene-ethylene block copolymer (MFR 544) 90, propylene-ethylene block copolymer (MFR 33) 10, Irganox 1010 (neopentane tetra-4-tert-butyl-4-hydroxyhydrocinnamate) 0.1, Irgafos 168 (tris(2,4-di-tert-butylphenyl) phosphite) 0.05, and calcium stearate were kneaded, and cut under water to give a title composition granulate.

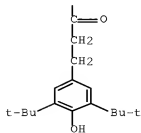
IT 6683-19-8, Irganox 1010  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (production of polypropylene-based composition granulate useful for moldability additives)  
 RN 6683-19-8 HCAPLUS  
 CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

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PAGE 2-A



CC 37-6 (Plastics Manufacture and Processing)  
 ST polypropylene propylene ethylene block copolymer  
 granulate moldability additive

- IT Fillers  
(inorg.; production of polypropylene-based composition granulate useful for moldability additives)
- IT Polysiloxanes, uses  
RL: CAT (Catalyst use); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)
- IT Polymer blends  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)
- IT 49718-23-2, Methyl hydrogen silane diol homopolymer  
RL: CAT (Catalyst use); USES (Uses)  
(assumed monomer; production of polypropylene-based composition granulate useful for moldability additives)
- IT 88-95-9, Phthaloyl dichloride 97-93-8, Triethyl aluminum, uses 100-99-2, uses 754-05-2, Trimethyl vinyl silane 5593-70-4, Titanium tetrabutoxide 7550-45-0, Titanium tetrachloride, uses 7786-30-3, Magnesium chloride, uses 9004-73-3, Poly[oxy(methylsilylene)] 10026-04-7, Silicon tetrachloride 18293-81-7, tert-Butyl methyl dimethoxy silane  
RL: CAT (Catalyst use); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)
- IT 106565-43-9P, Ethylene-propylene block copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)
- IT 1592-23-0, Calcium stearate 6683-19-8, Irganox 1010 31570-04-4, Irgafos 168  
RL: MOA (Modifier or additive use); USES (Uses)  
(production of polypropylene-based composition granulate useful for moldability additives)

L39 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:919872 HCAPLUS Full-text

DOCUMENT NUMBER: 147:278544

TITLE: Dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers

INVENTOR(S): Markov, A. V.; Persits, V. G.; Romanov, A. S.; Kopylov, V. M.; Ivanov, V. V.; Kuleznev, V. N.; Slavin, G. S.

PATENT ASSIGNEE(S): OAO "Penta-91", Russia

SOURCE: Russ., 9pp.  
CODEN: RUXXE7

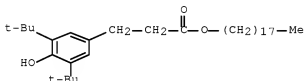
DOCUMENT TYPE: Patent  
LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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RU 2304597	C1	20070820	RU 2005-141366	200512 30

- AB Dry dispersed modifier for obtaining cross-linked polymers and  $\alpha$ -olefin copolymers is composed of crosslinking agent which is an unsatd. hydrolyzable organosilane (A), free-radical initiator which is organic peroxide (B), a moisture absorber which is ethoxy- and/or acetoxy silane (C), a hydrolysis/condensation catalyst which is an organic salts of tin, organic derivs. of sulfonic and disulfonic acids (D), a stabilizer/antioxidant which is an organic derivative of tert-butylphenol or Ph phosphite (E), an inorg. finely dispersed filler/absorbent which is an oxide or silicate of metal selected from calcium, magnesium, aluminum, silicon, and titanium, or their mixture (F), and optionally, a binder which is a polyolefin or  $\alpha$ -olefin copolymer (G), at weight ratio of A:B:C:D:E:F:G as (50-65):(3.0-5.0):(5.0-8.0):(1.0-2.5):(6.8-8.0):(15-30):(0-16). The use of this modifier gives a simplified technol. for producing siloxane-linkage cross-linked/vulcanized polymers with reduced production cost and the technol. results in polymers with desirable mech. properties, thermal and chemical stability, and improved appearance of articles produced from polymers.
- IT 2082-79-3, Irganox 1076  
RL: TEM (Technical or engineered material use); USES (Uses)  
(dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)
- RN 2082-79-3 HCAPLUS
- CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



- CC 37-6 (Plastics Manufacture and Processing)
- IT Inorganic compounds  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Agonite; dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)
- IT Crosslinking agents  
Powders  
(dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)
- IT Polyolefins  
RL: TEM (Technical or engineered material use); USES (Uses)  
(dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)
- IT Composition  
(modification agent; dry powdered modifier composition for crosslinking polymers and alpha-olefin copolymers through siloxane linkages)

- IT Crosslinking  
Materials processing  
(polymer; dry powdered modifier composition  
for crosslinking polymers and alpha-olefin copolymers  
through siloxane linkages)
- IT 9003-27-4, Polyisobutylene 24937-78-8, Ethylene-vinyl acetate  
copolymer 92815-91-3  
RL: POF (Polymer in formulation); USES (Uses)  
(binder in the composition; dry powdered modifier composition for  
crosslinking polymers and alpha-olefin copolymers  
through siloxane linkages)
- IT 77-58-7, Dibutyltin dilaurate 78-63-7 80-43-3, Dicumylperoxide  
4731-77-5, Dibutyltin dicaprylate 13269-61-9, Butylperoxybenzoate  
27176-87-0, Dodecylbenzenesulfonic acid 60223-95-2,  
Dinonylnaphthalenedisulfonic acid  
RL: CAT (Catalyst use); USES (Uses)  
(dry powdered modifier composition for crosslinking  
polymers and alpha-olefin copolymers through siloxane  
linkages)
- IT 78-08-0, Vinyltriethoxysilane 128-37-0, Agidol 1, uses  
2082-79-3, Irganox 1076 2768-02-7, Vinyltrimethoxysilane  
4253-34-3, Methyltriacetoxysilane 7631-86-9, Silicon dioxide, uses  
11099-06-2, Ethyl silicate 12244-10-9, Albite 13397-26-7,  
Calcite, uses 13463-67-7, Titanium dioxide, uses 14807-96-6,  
Talc, uses 18169-68-1 31570-04-4, Irgafos 168  
RL: TEM (Technical or engineered material use); USES (Uses)  
(dry powdered modifier composition for crosslinking  
polymers and alpha-olefin copolymers through siloxane  
linkages)
- IT 9002-88-4, Polyethylene  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(high or low d., binder in the composition or bulk polymer;  
dry powdered modifier composition for crosslinking  
polymers and alpha-olefin copolymers through siloxane  
linkages)

L39 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:14060 HCAPLUS Full-text

DOCUMENT NUMBER: 146:101705

TITLE: Resin additive composition  
with good handling property and property of  
remaining in a resin

INVENTOR(S): Yukino, Toshinori; Fukushima, Mitsuru; Tanji,  
Naoko; Yokota, Akiko

PATENT ASSIGNEE(S): Adeka Corporation, Japan

SOURCE: PCT Int. Appl., 27pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2007000876	A1	20070104	WO 2006-JP311249	

200606  
05

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM,  
 KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG,  
 MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT,  
 RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
 RW: AI, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
 IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,  
 TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 EP 1897914 A1 20080312 EP 2006-756995 200606  
 05  
 R: DE, FR, GB  
 CN 101213260 A 20080702 CN 2006-80023762 200712  
 28  
 US 20090088513 A1 20090402 US 2007-994203 200712  
 28  
 PRIORITY APPLN. INFO.: JP 2005-189728 A 200506  
 29  
 WO 2006-JP311249 W 200606  
 05

## OTHER SOURCE(S): MARPAT 146:101705

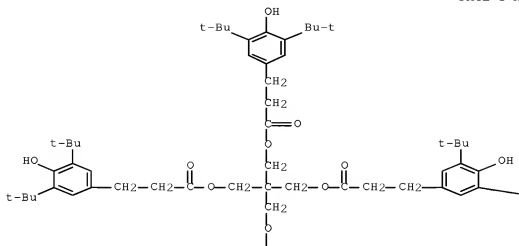
AB The composition is obtained by impregnating a powdery inorg. material (A) with a resin additive (B) in advance, wherein an oil absorption of A is >150 mL/100 g. Thus, 30 parts Neusilin US2 (aluminum magnesium silicate) and 70 parts mixture of 2,2,6,6-tetramethyl-4-piperidinyl hexadecanoate and 2,2,6,6-tetramethyl-4-piperidinyl octadecanoate were mixed to give a title composition, 0.4 parts of which was kneaded with polypropylene 100, calcium stearate 0.1, tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl]methane 0.1, tris(2,4-di-tert-butylphenyl)phosphite 0.05, and hexadecyl 3,5-di-tert-butyl-4-hydroxybenzoate 0.1 parts at 250° to give a resin composition

IT 6683-19-8, Tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl]methane  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (resin additive composition with good handling property and property of remaining in a resin)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

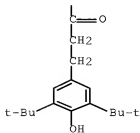
PAGE 1-A



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PAGE 2-A



CC 37-6 (Plastics Manufacture and Processing)  
 ST additive resin compn inorg powder  
 IT Amines, uses

RL: MOA (Modifier or additive use); USES (Uses)  
 (hindered; resin additive composition with good  
 handling property and property of remaining in a resin)

IT UV stabilizers  
 (resin additive composition with good handling  
 property and property of remaining in a resin)

IT 1344-95-2, Calcium silicate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (Florite RT; resin additive composition with good  
 handling property and property of remaining in a resin)

IT 101-02-0, Triphenylphosphite 1592-23-0, Calcium stearate  
 1843-05-6, 2-Hydroxy-4-octyloxybenzophenone 6683-19-8,  
 Tetrakis[3-(3,5-di-tert-butyl-4-  
 hydroxyphenyl)propionyloxymethyl]methane 7631-86-9, Mizukasil  
 P-526, uses 12511-31-8, Neusilin US2 24860-22-8,  
 2,2,6,6-Tetramethyl-4-piperidinyl octadecanoate 31570-04-4,  
 Tris(2,4-di-tert-butylphenyl)phosphite 54065-80-4, Kyowaad 700  
 67845-93-6, Hexadecyl 3,5-di-tert-butyl-4-hydroxybenzoate  
 85916-01-4, 2,2,6,6-Tetramethyl-4-piperidinyl hexadecanoate  
 112760-18-6, Kyowaad 2100  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (resin additive composition with good handling  
 property and property of remaining in a resin)

IT 9003-07-0, Polypropylene  
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
 (resin additive composition with good handling  
 property and property of remaining in a resin)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
 RECORD (2 CITINGS)

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L39 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2006:940368 HCAPLUS Full-text  
 DOCUMENT NUMBER: 145:336787  
 TITLE: Production process of dust-free  
 composite additive for polymer

INVENTOR(S): Yang, Baozhu; Guo, Sheng; Diao, Chunsen; Liu,  
 Jizhao; Shi, Zhijian; Peng, Guolin; Zhao,  
 Yanbin; Lian, Yebo; Wang, Shuhong

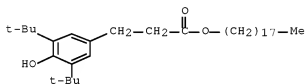
PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu,  
 9pp.  
 CODEN: CNXXEV

DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 1702103	A	20051130	CN 2004-10024142	200405 24
CN 1274746	C	20060913		
PRIORITY APPLN. INFO.:			CN 2004-10024142	200405 24

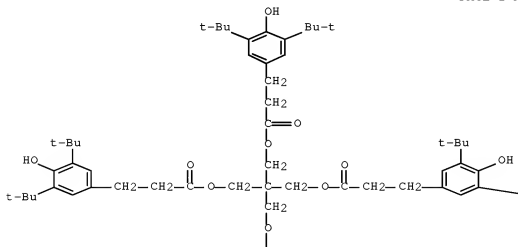


- AB The title production process comprises (1) mixing additive components of low m.p. 10-90 wt%, and additive components of high m.p. 10-90 wt%; (2) extruding at a temperature to melt low m.p. components while keep high m.p. components un-molten; and (3) calendaring, cooling, crushing, and classifying. The obtained granular additive of irregular polyhedral shape with diameter of 0.1-10 mm has high mech. strength and wide adaptability.
- IT 2082-79-3, n-Octadecyl-3-(4'-hydroxy-3',5'-di-tert-butyl phenyl)propionate 6683-19-8, Pentaerythrityl tetrakis (3,5-di-tert-butyl-4-hydroxyphenyl)propionate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (production process of dust-free composite additive for polymer)
- RN 2082-79-3 HCAPLUS
- CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



- RN 6683-19-8 HCAPLUS
- CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

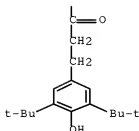
PAGE 1-A



PAGE 1-B

-Bu-t

PAGE 2-A



- IC ICM C08K009-00
- CC 37-6 (Plastics Manufacture and Processing)
- ST dust free composite additive polymer
- IT Polyamides, uses  
Polycarbonates, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(production process of dust-free composite additive for polymer)
- IT Polyolefins  
RL: TEM (Technical or engineered material use); USES (Uses)  
(production process of dust-free composite additive for polymer)
- IT 112-84-5, Erucyl amide 557-05-1, Zinc stearate 1592-23-0, Calcium stearate 2082-79-3, n-Octadecyl-3-(4'-hydroxy-3',5'-di-tert-butyl phenyl)propionate 6683-19-8, Pentaerythrityl tetrakis (3,5-di-tert-butyl-4-hydroxyphenyl)propionate 7631-86-9, Silica, uses 10213-78-2, N,N-Bis(2-hydroxyethyl)stearylamine 31570-04-4, Tris(2,4-di-tert-butyl-phenyl)phosphite 88608-79-1, 1,3,2,4-Di(ethylbenzylidene) sorbitol  
RL: MOA (Modifier or additive use); USES (Uses)  
(production process of dust-free composite additive for polymer)
- IT 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-28-5, Poly(1-butene) 9003-53-6, Polystyrene

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(production process of dust-free composite additive for polymer)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L39 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2006:608718 HCAPLUS Full-text  
DOCUMENT NUMBER: 145:46716  
TITLE: Non-powdery compositions of additives for plastics  
INVENTOR(S): Malucelli, Decio; Consalvi, Marco; Pradella, Fiorella; Fait, Anna  
PATENT ASSIGNEE(S): Basell Poliolefine Italia S.r.l., Italy  
SOURCE: PCT Int. Appl., 22 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2006064006	A1	20060622	WO 2005-EP56752	20051213
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
AU 2005315598	A1	20060622	AU 2005-315598	20051213
CA 2591085	A1	20060622	CA 2005-2591085	20051213
EP 1824909	A1	20070829	EP 2005-817553	20051213
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 101076553	A	20071121	CN 2005-80042628	20051213
JP 2008524361	T	20080710	JP 2007-546046	20051213
BR 2005017180	A	20080930	BR 2005-17180	200512

KR 2007087560	A	20070828	KR 2007-710920	13
				200705
US 20080119606	A1	20080522	US 2007-793192	14
				200706
IN 2007CN02602	A	20070907	IN 2007-CN2602	14
				200706
PRIORITY APPLN. INFO.:			EP 2004-29976	A
				200412
				17
			US 2005-664481P	P
				200503
				23
			WO 2005-EP56752	W
				200512
				13

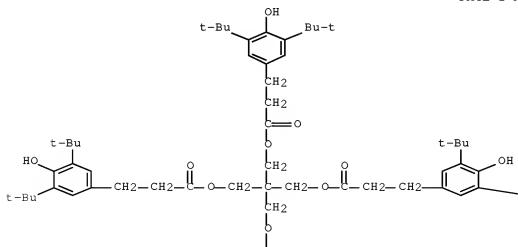
AB The comps. comprise: (A) 1-25% of a polyolefin matrix comprising one or more polyolefins having a m.p.  $\leq 160^\circ$ , and (B) 75-99% of one or more solid additives for polymers. Thus, 1-butene homopolymer 9.1, Irganox 1010 (antioxidant) 22.7, Irgafos 168 (antioxidant) 44.5, and calcium stearate 22.7% were kneaded and extruded at  $120^\circ$  to give a title composition

IT 6683-19-8, Irganox 1010  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (non-powdery comps. of additives for plastics)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl ester (CA INDEX NAME)

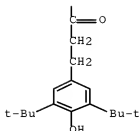
PAGE 1-A



PAGE 1-B

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PAGE 2-A



CC 37-6 (Plastics Manufacture and Processing)  
IT 532-32-1, Sodium benzoate 1592-23-0, Calcium stearate  
6683-19-8, Irganox 1010 31570-04-4, Irgafos 168  
135861-56-2, Millad 3988  
RL: MOA (Modifier or additive use); USES (Uses)  
(non-powdery compns. of additives for plastics)  
IT 9003-28-5 25087-34-7, Ethylene-1-butene copolymer  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); PYP (Physical process); PROC (Process); USES (Uses)  
(non-powdery compns. of additives for plastics)  
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L39 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2003:817827 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:292973  
TITLE: Granular polymer  
additives and their preparation  
Semen, John  
INVENTOR(S):  
PATENT ASSIGNEE(S): Albemarle Corp., USA  
SOURCE: U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of  
U.S. Ser. No. 528,675.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English

July 26, 2009

10/586,707

30

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20030193041	A1	20031016	US 2001-792087	20010223
US 6821456	B2	20041123		
US 6056898	A	20000502	US 1998-158588	19980922
US 6126862	A	20001003	US 1998-203941	19981202
US 6126863	A	20001003	US 1998-204121	19981202
US 6800228	B1	20041005	US 2000-528675	20000320
CA 2438893	A1	20020906	CA 2001-2438893	20010918
WO 2002068523	A1	20020906	WO 2001-US42196	20010918
W: CA, JP				
RM: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,				
NL, PT, SE, TR				
EP 1363972	A1	20031126	EP 2001-979895	20010918
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,				
PT, IE, FI, CY, TR				
JP 2004529997	T	20040930	JP 2002-568627	20010918
US 20050009725	A1	20050113	US 2004-911253	20040804
US 7425290	B2	20080916		
US 20090054698	A1	20090226	US 2008-201379	20080829
PRIORITY APPLN. INFO.:			US 1998-158588	A2 19980922
			US 1998-203941	A2 19981202
			US 1998-204121	A2 19981202
			US 2000-528675	A2 200003

20

US 2001-792087	A	20010223
WO 2001-US42196	W	20010918
US 2004-911253	A3	20040804

AB A compacted particulate polymer additive composition in a dry granular form formed from a substantially uniform mixture of the following components: (a) at least one particulate sterically-hindered phenolic compound, and (b) one or more particulate polymer additives other than a sterically-hindered phenolic compound; wherein the particles of the composition are held together in compacted dry granular form exclusively or substantially exclusively by contact with dried surfaces of in situ desolvated particles from particles of one or more at least partially solvated components of (a), and optionally by contact with dried surfaces of in situ desolvated particles from particles of one or more at least partially solvated components of (b). Compns. of this type except that there is no component (b) are also described.

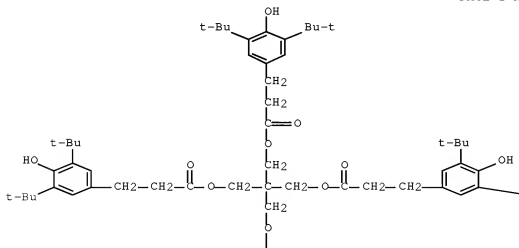
IT 6683-19-8, Irganox 1010

RL: MOA (Modifier or additive use); USES (Uses)  
(granular polymer additives and  
their preparation)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

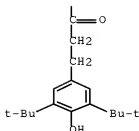
PAGE 1-A



PAGE 1-B

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PAGE 2-A



IC ICM C09K015-22  
 ICS C09K015-32  
 INCL 252400240; 252403000  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST hindered phenol additive granular polymer  
 IT Antioxidants  
 Crystal nucleating agents  
 Light stabilizers  
 (granular polymer additives and  
 their preparation)  
 IT Phosphites  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (granular polymer additives and  
 their preparation)  
 IT Phenols, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (hindered; granular polymer additives  
 and their preparation)  
 IT 532-32-1, Sodium benzoate 1709-70-2, ETHANOX 330  
 6683-19-8, Irganox 1010 11097-59-9, DHT-4A 19046-64-1,  
 1,3:2,4-Di-O-benzylidenesorbitol 26741-53-7,  
 Bis(2,4-di-tert-butylphenyl)pentaerythritol diphosphite  
 27676-62-6, 1,3,5-Tris(3,5-di-tert-butyl-4-  
 hydroxybenzyl)isocyanurate 31570-04-4, Irgafos 168 81541-12-0,  
 1,3:2,4-Bis-(p-methylbenzylidene)sorbitol 135861-56-2,  
 1,3:2,4-Bis(3,4-dimethylbenzylidene)sorbitol 215392-42-0, Ultranox



627A

RL: MOA (Modifier or additive use); USES (Uses)  
 (granular polymer additives and  
 their preparation)

REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L39 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:886197 HCAPLUS Full-text

DOCUMENT NUMBER: 137:385493

TITLE: Granular additive compositions, their  
 manufacture, and polyolefin compositions and  
 moldings

INVENTOR(S): Kamioka, Kazuaki; Ishikawa, Masahide

PATENT ASSIGNEE(S): New Japan Chemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002332359	A	20021122	JP 2001-140005	200105 10
PRIORITY APPLN. INFO.:				200105 10

AB Title additive compns. comprise (A) 40-60% of  $\geq 1$  dibenzylidenesorbitols with m.p.  $\geq 250^\circ$  and (B)  $\geq 2$  compds. selected from antioxidants, antacids, and lubricants. In the compns.,  $\geq 1$  of B has m.p. or softening temperature  $\leq 140^\circ$ . The compns. are manufactured by (1) mixing A powders and B powders, (2) extruding the powdered mixts. while controlling temperature of the mixts. at die plates of extruders to  $T_m - (T_m + 30)^\circ$  ( $T_m$  = lowest m.p. or softening temperature of B), and granulating. Thus, Gel All MD I; 1,3:2,4-di(p-methylbenzylidene)sorbitol, Irganox 1010 [tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl]methane], Irgafos 168 [tris(2,4-di-tert-butylphenyl) phosphite], and Calcium Stearate CP (Ca stearate) were mixed and extruded at .apprx.120° to give a composition with good storage stability. Then, the composition was mixed with ethylene-propylene isotactic copolymer, pelletized, and injection molded to give a test piece showing good dispersibility of I as nucleating agents.

IT 2082-79-3, Irganox 1076 6683-19-8, Irganox

1010 36443-68-2, Triethylene glycol

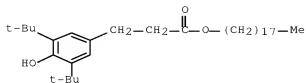
bis[3-(3-tert-butyl-4-hydroxy-5-methylphenyl) propionate

RL: MOA (Modifier or additive use); USES (Uses)

(antioxidants; granular dibenzylidenesorbitol-containing  
 additives with good storage stability for polyolefins)

RN 2082-79-3 HCAPLUS

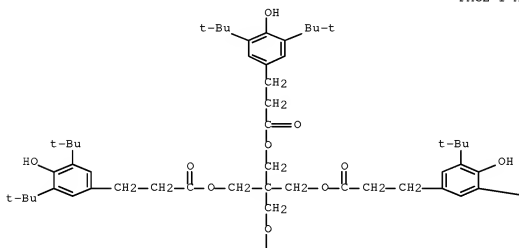
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
 octadecyl ester (CA INDEX NAME)



RN 6683-19-8 HCAPLUS

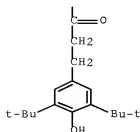
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

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PAGE 1-B

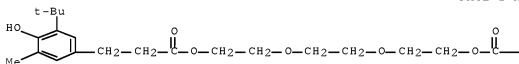
PAGE 2-A



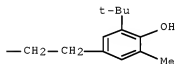
RN 36443-68-2 HCAPLUS

CN Benzenepropanoic acid, 3-(1,1-dimethylethyl)-4-hydroxy-5-methyl-,  
1,1'-[1,2-ethanediylbis(oxy-2,1-ethanediyl)] ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM C08J003-12  
ICS B29B009-02; B29C047-78; C08J003-20; C08J005-00; C08K003-22;  
C08K003-26; C08K005-053; C08K005-098; C08K005-13; C08K005-20;  
C08K005-3477; C08K005-52; C08L023-00; B29K023-00
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38
- IT Carbonates, uses  
Oxides (inorganic), uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(antacids; granular dibenzylidenesorbitol-containing  
additives with good storage stability for polyolefins)
- IT Antacids  
Antioxidants  
Lubricants  
(binders; granular dibenzylidenesorbitol-containing  
additives with good storage stability for polyolefins)
- IT Crystal nucleating agents  
(dibenzylidenesorbitols; granular  
dibenzylidenesorbitol-containing additives with good storage  
stability for polyolefins)
- IT Binders  
(granular dibenzylidenesorbitol-containing additives with  
good storage stability for polyolefins)
- IT Molded plastics, uses

- Polyolefins  
 RL: POF (Polymer in formulation); USES (Uses)  
 (granular dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)
- IT Fatty acids, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (metal salts, antacids; granular dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)
- IT 1592-23-0, Calcium stearate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (Calcium Stearate CP, antacids; granular dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)
- IT 11097-59-9, DHT 4A  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antacids; granular dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)
- IT 119-47-1, 2,2'-Methylenebis(4-methyl-6-tert-butylphenol) 128-37-0, 2,6-Di-tert-butyl-4-methylphenol, uses 1709-70-2, 1,3,5-Tris(3,5-di-tert-butyl-4-hydroxybenzyl)-2,4,6-trimethylbenzene 2082-79-3, Irganox 1076 3806-34-6, Di-tert-butyl-4-methylphenyl diphenyl ether 6683-19-8, Irganox 1010 26741-53-7, Bis(2,4-di-tert-butylphenyl)pentamethylene diphenyl ether 27676-62-6, 1,3,5-Tris(3,5-di-tert-butyl-4-hydroxybenzyl) isocyanurate 31570-04-4, Irgafos 168 36443-68-2, Triethylene glycol bis[3-(3-tert-butyl-4-hydroxy-5-methylphenyl) propionate 86624-80-8, Tetrakis(2,4-di-tert-butylphenyl)-4,4'-biphenylene diphosphite  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antioxidants; granular dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)
- IT 56453-76-0, Ethylene-propylene isotactic copolymer  
 RL: POF (Polymer in formulation); USES (Uses)  
 (granular dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)
- IT 112-84-5, Amide E 123-28-4, Dilauryl 3,3'-thiodipropionate 124-26-5, Amide S 300-92-5, Aluminum distearate 301-02-0, Amide O-N 557-04-0, Magnesium stearate 557-05-1, Zinc stearate 593-29-3, Potassium stearate 637-12-7, Aluminum tristearate 693-36-7, Distearyl 3,3'-thiodipropionate 822-16-2, Sodium stearate 2452-01-9, Zinc laurate 6865-33-4, Calcium ricinoleate 13040-19-2, Zinc ricinoleate 16529-65-0, Zinc behenate 16545-54-3, Dimyristyl 3,3'-thiodipropionate 27215-38-9, Glycerin monolaurate 31566-31-1, Rikemal S 100 43168-33-8, Magnesium behenate 52258-47-6, Calcium montanate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (lubricants; granular dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)
- IT 81541-11-9 81541-12-0, Gel All MD 135861-56-2, Millad 3988 475985-64-9  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (nucleating agents; granular dibenzylidenesorbitol-containing additives with good storage stability for polyolefins)

July 26, 2009

10/586,707

37

TITLE: Granular polymer  
 additives and their preparation  
 INVENTOR(S): Semen, John  
 PATENT ASSIGNEE(S): Albemarle Corporation, USA  
 SOURCE: PCT Int. Appl., 37 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 7  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002068523	A1	20020906	WO 2001-US42196	20010918
W: CA, JP RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 20030193041	A1	20031016	US 2001-792087	20010223
US 6821456	B2	20041123		
CA 2438893	A1	20020906	CA 2001-2438893	20010918
EP 1363972	A1	20031126	EP 2001-979895	20010918
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004529997	T	20040930	JP 2002-568627	20010918
PRIORITY APPLN. INFO.:				
			US 2001-792087	A 20010223
			US 1998-158588	A2 19980922
			US 1998-203941	A2 19981202
			US 1998-204121	A2 19981202
			US 2000-528675	A2 20000320
			WO 2001-US42196	W 20010918

AB A compacted particulate polymer additive composition in a dry granular form formed from a substantially uniform mixture of the following components: (a) at least one particulate sterically-hindered phenolic compound, and (b) one or more particulate polymer additives other than a sterically-hindered phenolic compound; wherein the particles of said composition are held together in compacted dry granular form exclusively or substantially exclusively by contact with dried surfaces of in situ desolvated particles from particles of one or more at least partially solvated components of (a), and optionally by contact with dried surfaces of in situ desolvated particles from particles of one or more at least partially solvated components of (b). Compns. of this type except that there is no component (b) are also described.

IT 6683-19-8, Irganox 1010

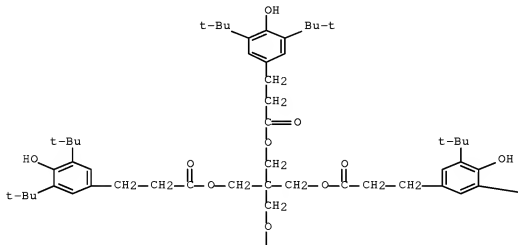
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(granular polymer additives prepared from desolvated additive particles preparation)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

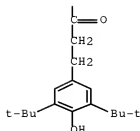
PAGE 1-A



PAGE 1-B

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PAGE 2-A



- IC ICM C08K005-13  
ICS B01J002-00; B29B009-00
- CC 37-6 (Plastics Manufacture and Processing)
- ST granular sterically hindered phenol additive  
polymer
- IT Neutralization  
(agents, other additives; granular  
polymer additives prepared from desolvated  
additive particles of sterically hindered phenols and,  
optionally, other additives)
- IT Antioxidants  
(granular polymer additives prepared  
from desolvated additive particles of sterically hindered phenols  
and, optionally, other additives)
- IT Phenols, uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PYP (Physical process); PROC (Process); USES  
(Uses)  
(hindered; granular polymer additives  
prepared from desolvated additive particles of sterically hindered  
phenols and, optionally, other additives)
- IT Crystal nucleating agents  
Light stabilizers  
UV stabilizers  
(other additives; granular polymer  
additives prepared from desolvated additive particles of

- sterically hindered phenols and, optionally, other additives)
- IT Carbonates, uses  
Layered double hydroxides  
Oxides (inorganic), uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(other additives; granular polymer additives prepared from desolvated additive particles of sterically hindered phenols and, optionally, other additives)
- IT 11097-59-9, DHT 4A  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(DHT 4A, other additive; granular polymer additives prepared from desolvated additive particles preparation)
- IT 215392-42-0, Ultrinox 627A  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(Ultrinox 627A, other additive; granular polymer additives prepared from desolvated additive particles preparation)
- IT 1709-70-2, 1,3,5-Trimethyl-2,4,6-tris(3,5-di-tert-butyl-4-hydroxybenzyl)benzene 27676-62-6, Tris(3,5-di-tert-butyl-4-hydroxybenzyl) isocyanurate  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(granular polymer additives prepared from desolvated additive particles of sterically hindered phenols and, optionally, other additives)
- IT 6683-19-8, Irganox 1010  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(granular polymer additives prepared from desolvated additive particles preparation)
- IT 532-32-1, Sodium benzoate 19046-64-1, 1,3:2,4-Di-O-benzylidenesorbitol 26741-53-7, Bis(2,4-di-tert-butylphenyl)pentaerythritol diphosphite 31570-04-4, Tris(2,4-di-tert-butylphenyl) phosphite 81541-12-0, 1,3:2,4-Bis(p-methylbenzylidene)sorbitol 135861-56-2, 1,3:2,4-Bis(3,4-dimethylbenzylidene)sorbitol  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(other additive; granular polymer additives prepared from desolvated additive particles of sterically hindered phenols and, optionally, other additives)
- REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L39 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2001:788914 HCAPLUS [Full-text](#)  
DOCUMENT NUMBER: 135:345201  
TITLE: Mixing method of resins and additives for manufacturing uniform



mixtures  
 INVENTOR(S): Kawasaki, Hiroyuki; Kanemasa, Tomoaki; Ishikawa,  
 Hiroyuki; Morita, Kazumasa  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001302803	A	20011031	JP 2000-122201	200004 24
JP 3736280	B2	20060118	JP 2000-122201	200004 24

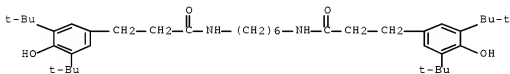
PRIORITY APPLN. INFO.:

AB The method comprises removing powdered resins stuck on resin particle surface to  $\leq 100$  ppm, covering resin particle surface with spreading agents, and mixing with powdered additives. Thus, polyamide pellets (Novamid 1022S) was washed with water, covered with ethylene oxide-sorbitan monolaurate adduct (Nonion LT 221), and mixed with 1000 ppm ethylenebis(stearylamide) (Armowax EBS) (A) and 1000 ppm N,N'-hexamethylenebis(3,5-di-tert-butyl-4-hydroxyphenylamine) (Irganox 1098) (B) to give a composition showing dropped amount of A 2 ppm and B 3 ppm after shaking.

IT 23128-74-7, Irganox 1098  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antioxidant; mixing method of resins and  
 additives for manufacturing uniform mixts.)

RN 23128-74-7 HCAPLUS

CN Benzenepropanamide, N,N'-1,6-hexanediylbis[3,5-bis(1,1-dimethylethyl)-4-hydroxy- (CA INDEX NAME)]



IC ICM C08J003-20  
 ICS B29B007-50; B29K067-00; B29K069-00; B29K077-00; C08L067-00;  
 C08L069-00; C08L077-00; C08L101-00

CC 37-6 (Plastics Manufacture and Processing)

ST polyamide pellet mixing lubricant antioxidant

IT Polyamides, properties  
 Polycarbonates, properties  
 Polyesters, properties  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical  
 or engineered material use); USES (Uses)  
 (mixing method of resins and  
 additives for manufacturing uniform mixts.)

IT 23128-74-7, Irganox 1098  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antioxidant; mixing method of resins and  
 additives for manufacturing uniform mixts.)

IT 110-30-5, Armowax EBS  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (lubricant; mixing method of resins and  
 additives for manufacturing uniform mixts.)

IT 371115-50-3, Novamid 1022S  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical  
 or engineered material use); USES (Uses)  
 (mixing method of resins and  
 additives for manufacturing uniform mixts.)

IT 9005-64-5, Nonion LT 221  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (spreading agent; mixing method of resins and  
 additives for manufacturing uniform mixts.)

L39 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:636136 HCAPLUS Full-text

DOCUMENT NUMBER: 135:211772

TITLE: Addition of stabilizer additives to  
 polymer particles for rotational molding  
 INVENTOR(S): Fatnes, Anne Marie; Oysaed, Harry; Frohaug,  
 Astrid; Jantvedt, Svein

PATENT ASSIGNEE(S): Borealis Technology Oy, Finland

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

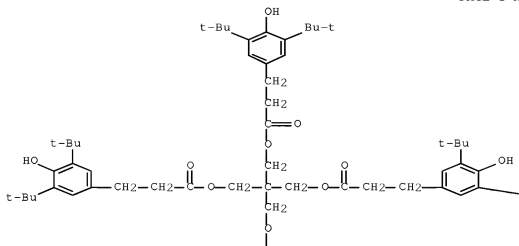
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062833	A1	20010830	WO 2001-GB721	20010221
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1261660	A1	20021204	EP 2001-907891	20010221
EP 1261660	B1	20041222	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR	
BR 2001008532	A	20030422	BR 2001-8532	20010221
JP 2003524046	T	20030812	JP 2001-562612	20010221

21				
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	200102			
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	200102			
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	200102			
	21			
	200102			
	21			
	200208			
	20			
	200209			
	12			
PRIORITY APPLN. INFO.:		GB 2000-4043	A	
				200002
				21
		WO 2001-GB721	W	
				200102
				21
AB	A polyolefin polymer powder for use in rotational molding requires the presence of stabilizers, including UV-stabilizers, to prevent degradation during processing and use. Rotomolding polymer particles comprises (i) obtaining many polyolefin polymer particles having a mean particle size 1-2000 µm, (ii) heating a mixture of (A) ≥1 phenolic antioxidant, (B) ≥1 organic phosphite or phosphonite antioxidant, (C) ≥1 UV-stabilizer selected from Chimassorb 2020, Cyasorb UV 3346, Chimassorb 944, Cyasorb 4042 or Cyasorb 4611, (D) a diluent, and optionally (E) a metal stearate, to 20-200°, (iii) depositing the mixture onto the polyolefin polymer particles, and optionally (iv) blending a metal stearate to the resulting polyolefin polymer particles if component E was not present in the mixture			
IT	6683-19-8, Irganox 1010			
	RL: MOA (Modifier or additive use); USES (Uses)			
	(phenolic antioxidants/phosphite heat stabilizers/UV stabilizers for rotomolding polymer particles)			
RN	6683-19-8 HCAPLUS			
CN	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)			

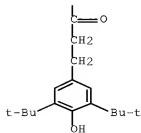
PAGE 1-A



PAGE 1-B

Chemical structure of a tert-butyl group (t-Bu).

PAGE 2-A



IC ICM C08J003-20  
 ICS C08K005-00; C08K005-134; C08K005-52; C08K005-34; C08K005-098;  
 C08L023-02

July 26, 2009

10/586,707

45

CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38  
 ST antioxidant UV stabilizer rotomolding polyolefin powder  
 IT Antioxidants  
 Heat stabilizers  
 UV stabilizers  
 (phenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
 for rotomolding polymer particles)  
 IT Molding of plastics and rubbers  
 (rotational; phenolic antioxidants/phosphite heat stabilizers/UV  
 stabilizers for rotomolding polymer particles)  
 IT 357396-94-2, Cyasorb 4042  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (lphenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
 for rotomolding polymer particles)  
 IT 557-05-1, Zinc stearate 2082-79-3, Irganox 1076  
 6683-19-8, Irganox 1010 26523-78-4, Tris(nonylphenyl)  
 phosphite 31570-04-4, Irgafos 168 38613-77-3, Irgafos P-EPQ  
 71878-19-8, Chimassorb 944 90751-07-8, Cyasorb UV 3346  
 145650-60-8, Irgafos 38 161717-32-4, Ultrinox 641 195300-91-5,  
 Chimassorb 2020 357407-76-2, Cyasorb 4611  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (phenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
 for rotomolding polymer particles)  
 IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 25213-02-9,  
 Ethylene-1-hexene copolymer  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
 formulation); PROC (Process); USES (Uses)  
 (phenolic antioxidants/phosphite heat stabilizers/UV stabilizers  
 for rotomolding polymer particles)  
 OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
 RECORD (2 CITINGS)  
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT  
 L39 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2001:338126 HCAPLUS Full-text  
 DOCUMENT NUMBER: 134:341271  
 TITLE: Mixtures of additives in granular form  
 for organic polymers  
 INVENTOR(S): Neri, Carlo; Callierotti, Corrado  
 PATENT ASSIGNEE(S): Great Lakes Chemical (Europe) GmbH, Switz.  
 SOURCE: Eur. Pat. Appl., 14 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 1097965	A1	20010509	EP 2000-203647	200010 19
EP 1097965	B1	20050330		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
IT 99MI2205	A1	20010423	IT 1999-MI2205	

IT 1315251 B1 20030203 199910  
 US 20080194766 A1 20080814 US 2008-16780 21

200801  
 18

PRIORITY APPLN. INFO.: IT 1999-MI2205 A 199910  
 21

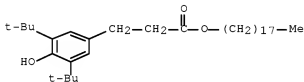
US 2000-692025 B1 200010  
 19

AB Mixts. of additives in granular form comprising  $\geq 1$  stabilizers for organic polymers,  $\geq 1$  organic or inorg. pigments, and/or  $\geq 1$  dyes, were obtained by extrusion at a temperature capable of enabling the partial or total melting of the lowest-melting component. The above mixts. can be used in the stabilization and dyeing of organic polymers.

IT 2082-79-3, Octadecyl  
 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (antioxidant; Mixts. of additives in granular form for organic polymers)

RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



IC ICM C08K005-00  
 ICS B01J002-20; C08J003-22

CC 38-2 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37

ST org polymer additive granular form;  
 stabilizer antioxidant pigment dye

IT Antioxidants  
 Dyes  
 Extrusion, nonbiological  
 Fillers  
 Light stabilizers  
 Pigments, nonbiological  
 Stabilizing agents  
 (Mixts. of additives in granular form for organic polymers)

IT Carbonates, uses  
 Kaolin, uses  
 Silicates, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (filler pigment; Mixts. of additives in granular form for organic polymers)

- IT Carbon black, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(inorg. pigment; Mixts. of additives in granular form  
for organic polymers)
- IT Amines, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(sterically hindered, N-alkoxy derivs., as light stabilizer;  
Mixts. of additives in granular form for organic  
polymers)
- IT Group VIA element compounds  
Silicates, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(thiosilicates, filler pigment; Mixts. of additives in  
granular form for organic polymers)
- IT 2082-79-3, Octadecyl  
3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate  
RL: MOA (Modifier or additive use); USES (Uses)  
(antioxidant; Mixts. of additives in granular  
form for organic polymers)
- IT 1592-23-0, Calcium stearate  
RL: MOA (Modifier or additive use); USES (Uses)  
(co-stabilizer; Mixts. of additives in granular form  
for organic polymers)
- IT 13462-86-7, Barite 14807-96-6, Talc, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(filler pigment; Mixts. of additives in granular form  
for organic polymers)
- IT 1309-37-1, Iron oxide, uses 1314-13-2, Zinc oxide, uses  
13463-67-7, Titanium dioxide, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(inorg. pigment; Mixts. of additives in granular form  
for organic polymers)
- IT 65-85-0D, Benzoic acid, ester derivs., uses 79-10-7D, Acrylic  
acid, ester derivs. 117-99-7D, derivs. 10096-91-0D,  
2-(2'-Hydroxyphenyl)benzotriazole, derivs. 14848-04-5,  
2-(2-Hydroxyphenyl)-1,3,5-triazine  
RL: MOA (Modifier or additive use); USES (Uses)  
(light stabilizer; Mixts. of additives in granular form  
for organic polymers)
- IT 12769-96-9, Ultramarine violet  
RL: MOA (Modifier or additive use); USES (Uses)  
(pigment; Mixts. of additives in granular form for organic  
polymers)
- IT 31570-04-4, Tris(2,4-di-tert-butylphenyl)phosphite  
RL: MOA (Modifier or additive use); USES (Uses)  
(polymer additive; Mixts. of  
additives in granular form for organic  
polymers)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L39 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2000:210252 HCAPLUS [Full-text](#)  
DOCUMENT NUMBER: 132:251898  
TITLE: Stabilized water-soluble polymer  
powders on the basis of polyoxyalkylene  
glycol carboxylates and their manufacture  
INVENTOR(S): Albrecht, Gerhard; Weichmann, Josef; Wutz,  
Konrad; Bichler, Manfred; Kern, Alfred

July 26, 2009

10/586,707

48

PATENT ASSIGNEE(S): SKW Trostberg Aktiengesellschaft, Germany  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2000017263	A1	20000330	WO 1999-EP7103	19990923
W: AU, CA, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19843730	A1	20000330	DE 1998-19843730	19980924
CA 2344546	A1	20000330	CA 1999-2344546	19990923
CA 2344546	C	20080212		
AU 9963291	A	20000410	AU 1999-63291	19990923
AU 750708	B2	20020725		
EP 1124892	A1	20010822	EP 1999-950546	19990923
EP 1124892	B1	20040922		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002526583	T	20020820	JP 2000-574169	19990923
AT 277112	T	20041015	AT 1999-950546	19990923
ES 2229775	T3	20050416	ES 1999-950546	19990923
US 6573316	B1	20030603	US 2000-720922	20001228
PRIORITY APPLN. INFO.:			DE 1998-19843730	A 19980924
			WO 1999-EP7103	W 19990923

AB The stabilized polymer powders, especially useful in manufacture of concrete, contain 0.01-10 weight% of a stabilizer selected from phenols, amines, phosphites, thio ethers, and thio acids, the stabilizer having been added to the aqueous polymer solution in liquid or dissolved form before conversion into a powder. Polymer powders thus protected against autoignition and oxidative degradation present unexpectedly high oxidative thermal stability



even when subjected to high temps. and oxidizing influences (air, oxygen). Thus, 200 g of a 36% solution of 75:25 methacrylic acid-polyethylene glycol Me ether methacrylate copolymer was mixed with 0.36 g Additin RC 7135 (styrenated diphenylamine) and spray dried to produce a powder with average particle diameter 28  $\mu$ m. This powder did not experience autoignition, whereas addition of the powdered additive to the unstabilized copolymer powder produced a product of similar particle size which did.

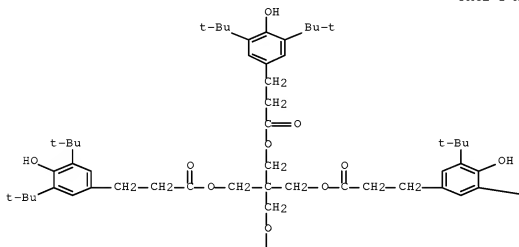
IT 6683-19-8

RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer; stabilized water-soluble powders of  
polyoxyalkylene glycol carboxylates)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-  
oxopropoxy)methyl]-1,3-propanediyl] ester (CA INDEX NAME)

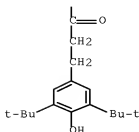
PAGE 1-A



PAGE 1-B

—Bu-t

PAGE 2-A



IC ICM C08K005-00  
ICS C04B024-32

CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 58

ST stabilization water soluble copolymer powder

IT Heat stabilizers  
(stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT Concrete  
(stabilized water-soluble powders of polyoxyalkylene glycol carboxylates for use in)

IT 12738-63-5 111740-39-7, Methacrylic acid-polyethylene glycol methyl ether methacrylate graft copolymer 167763-01-1D, Ethylene oxide-methacrylic acid graft copolymer, Me ether 262364-23-8 262364-24-9D, Me ether 262364-25-0 262364-26-1D, Me ether  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT 119-47-1, 2,2'-Methylenebis(6-tert-butyl-4-methylphenol)  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer, Additin RC 7115; stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT 96-69-5, 4,4'-Thiobis(2-tert-butyl-5-methylphenol)  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer, Lowinox 44S36; stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT 79-74-3, 2,5-Di-tert-amylhydroquinone  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer, Lowinox AH 25; stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

IT 92-84-2, Phenothiazine 128-37-0, Lowinox BHT, uses 693-36-7, Irganox PS 802 6683-19-8 36339-47-6, Hostanox OSP 1 52038-44-5, Vulkanox OCD 252858-71-2, Additin RC 7135  
RL: MOA (Modifier or additive use); USES (Uses)  
(stabilizer; stabilized water-soluble powders of polyoxyalkylene glycol carboxylates)

OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

July 26, 2009

10/586,707

51

DOCUMENT NUMBER: 132:195251  
 TITLE: Manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers  
 INVENTOR(S): Toritani, Akihiro; Shishido, Koichi; Matsumura, Koji; Makino, Hideaki; Nakada, Akira; Sato, Haruki  
 PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

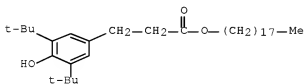
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000072882	A	20000307	JP 1998-243711	19980828
PRIORITY APPLN. INFO.:			JP 1998-243711	19980828

AB Title powdered graft copolymers are manufactured by spray drying latexes containing 100 parts diene graft copolymers with rubber content 50-85%, 0.1-2 parts hindered phenol stabilizers, and 0.3-6 parts thio ether stabilizers for powdering. Thus, a mixture containing 1,3-butadiene-Et methacrylate-Me methacrylate-styrene graft copolymer, triethylene glycol bis[3-(3-tert-butyl-5-methyl-4-hydroxyphenyl) propionate], dilauryl 3,3'-thiodipropionate, and Aerosil R 972 (SiO<sub>2</sub>) was spray dried to give powders with sharp particle size distribution, which were mixed with a PVC mixture and molded to give a test piece showing Izod impact strength 90 kg-cm/cm<sup>2</sup>.

IT 2082-79-3 36443-68-2  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (antioxidants; manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers by spray drying)

RN 2082-79-3 HCAPLUS

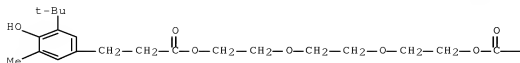
CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



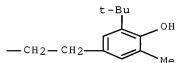
RN 36443-68-2 HCAPLUS

CN Benzenepropanoic acid, 3-(1,1-dimethylethyl)-4-hydroxy-5-methyl-, 1,1'-[1,2-ethanediylbis(oxy-2,1-ethanediyl)] ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM C08J003-12  
ICS C08J003-12; C08K005-13; C08K005-36; C08L051-04
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38
- ST diene graft polymer powder manuf spray drying;  
butadiene styrene rubber graft copolymer impact  
modifier; PVC impact resistance diene graft copolymer blend
- IT Phenols, uses  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(hindered, antioxidants; manufacture of powdered diene graft  
copolymers for impact modifiers of vinyl  
chloride polymers by spray drying)
- IT Antioxidants  
Impact-resistant materials  
(manufacture of powdered diene graft copolymers for  
impact modifiers of vinyl chloride polymers  
by spray drying)
- IT Thioethers  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(manufacture of powdered diene graft copolymers for  
impact modifiers of vinyl chloride polymers  
by spray drying)
- IT Polymer blends  
RL: PRP (Properties); TEM (Technical or engineered material use);  
USES (Uses)  
(manufacture of powdered diene graft copolymers for  
impact modifiers of vinyl chloride polymers  
by spray drying)
- IT Drying  
(spray; manufacture of powdered diene graft copolymers  
for impact modifiers of vinyl chloride polymers  
by spray drying)
- IT 123-28-4, Dilauryl 3,3'-thiodipropionate 2082-79-3  
7575-23-7D, Pentaerythritol tetrakis(3-mercaptopropionate), alkyl  
derivs. 36443-68-2  
RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
chemical process); PROC (Process); USES (Uses)  
(antioxidants; manufacture of powdered diene graft  
copolymers for impact modifiers of vinyl  
chloride polymers by spray drying)

IT 7631-86-9, Silica, uses 60842-32-2, Aerosil R 972  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (fillers; manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers by spray drying)

IT 256520-50-0P, 1,3-Butadiene-ethyl methacrylate-methyl methacrylate-styrene graft copolymer  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PREP (Preparation); PROC (Process); USES (Uses)  
 (manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers by spray drying)

IT 9002-86-2, Poly(vinyl chloride)  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (manufacture of powdered diene graft copolymers for impact modifiers of vinyl chloride polymers by spray drying)

L39 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:691156 HCAPLUS Full-text

DOCUMENT NUMBER: 131:311219

TITLE: Granulate compositions containing antiblocking agents as additives having good dispersibility and no dust for polymer films

INVENTOR(S): Tonnvik, Mats; Sturm, Andreas; Van Essche, Gonda; Schmidt, Andreas

PATENT ASSIGNEE(S): Grace GmbH, Germany

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

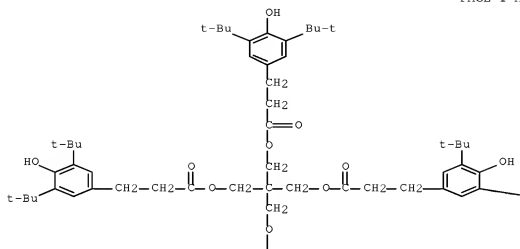
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9954396	A1	19991028	WO 1999-EP2559	19990416
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW				
RM: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19817257	A1	19991209	DE 1998-19817257	19980419
CA 2329227	A1	19991028	CA 1999-2329227	19990416
AU 9938173	A	19991108	AU 1999-38173	199904

AU 760539	B2	20030515		16
BR 9909708	A	20001226	BR 1999-9708	
				19990416
EP 1073692	A1	20010207	EP 1999-920682	
				19990416
EP 1073692	B1	20051026		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002512287	T	20020423	JP 2000-544734	
				19990416
AT 307852	T	20051115	AT 1999-920682	
				19990416
ES 2252943	T3	20060516	ES 1999-920682	
				19990416
TW 483913	B	20020421	TW 1999-88106008	
				19990608
ZA 2000005576	A	20010515	ZA 2000-5576	
				20001011
IN 195318	A1	20050204	IN 2000-MN508	
				20001016
MX 2000010147	A	20020108	MX 2000-10147	
				20001017
US 6569933	B1	20030527	US 2000-673875	
				20001211
PRIORITY APPLN. INFO.:			DE 1998-19817257	A
				19980419
			WO 1999-EP2559	W
				19990416
AB	The granulate composition consists of (a) 5-60% micronized silicic acid having average particle size 2-15 μ, specific pore volume 0.3-2.0 mL/g, and sp. surface (BET) 200-1000 m <sup>2</sup> /g, or (b) 5-75% dehydrated aluminosilicate with particle size 1-25 μ containing sodium, potassium and/or calcium cations, and (c) 25-95% organic additive composition containing a lubricant, an antioxidant, an antistatic agent, a light stabilizer, a flame retardant, and/or a softener.			
IT	6683-19-8, Irganox 1010 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses) (granulate compns. containing antiblocking agents as additives having good dispersibility for polymer films)			
RN	6683-19-8 HCAPLUS			
CN	Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)			

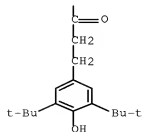
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CC 37-2 (Plastics Manufacture and Processing)  
 ST antiblocking agent additive granulate  
 polymer film; silicic acid aluminosilicate additive  
 granulate  
 IT 1592-23-0, Calcium stearate 6683-19-8, Irganox 1010  
 31570-04-4  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or  
 chemical process); PROC (Process); USES (Uses)  
 (granulate compns. containing antiblocking agents as  
 additives having good dispersibility for polymer films)  
 OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS  
 RECORD (5 CITINGS)  
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN  
 THE RE FORMAT

L39 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1997:425195 HCAPLUS Full-text  
 DOCUMENT NUMBER: 127:36041  
 ORIGINAL REFERENCE NO.: 127:6919a,6922a  
 TITLE: Acid-epoxy curing type powder coating  
 for a coated film having excellent yellow  
 resistance and appearance  
 INVENTOR(S): Nakae, Yasuhiko; Nakatsuka, Hitoshi; Inoue,  
 Koichi  
 PATENT ASSIGNEE(S): Nippon Paint Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 773268	A2	19970514	EP 1996-308066	199611 06
EP 773268 R: DE, GB	A3	19980429		
JP 09188833	A	19970722	JP 1996-296272	199611 08
US 5719212	A	19980217	US 1996-740349	199611 08
PRIORITY APPLN. INFO.:			JP 1995-291078	A 199511 09

OTHER SOURCE(S): MARPAT 127:36041  
 AB The powder coating composition comprises (A) an epoxy group-containing acrylic  
 resin prepared by polymerizing the monomer mixture (a) 35-65% epoxy group-  
 containing ethylenically unsatd. monomer, and (b) remainder amount of an  
 ethylenically unsatd. monomer which is different from the epoxy group-  
 containing ethylenically unsatd. monomer; (B) a polycarboxylic acid; and (C)  
 an antioxidant (m.p. 50-140°), optionally a surface modifier. A powder  
 composition containing glycidyl methacrylate-iso-Bu methacrylate-Me  
 methacrylate-styrene copolymer (glass transition temperature 52°) 100,



decanedicarboxylic acid 27.3, 2,6-ditert-butyl-4-methylphenol 1.27, tris(4-tert-butylphenyl)phosphite 2.54, surface modifier 0.76 parts, and silica, and other coating flow additives was applied onto a white panel and baked at 150° for 25 min to give a coated panel having good appearance.

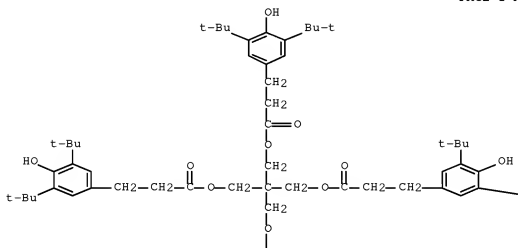
IT 6683-19-8

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(acid-epoxy curing type powder coating for a coated  
film having excellent yellow resistance and appearance)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

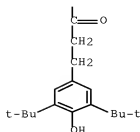
PAGE 1-A



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- IC ICM C09D133-14  
ICS C09D005-03; B05D007-26
- CC 42-10 (Coatings, Inks, and Related Products)
- ST acrylic epoxy powder coating; phenol antioxidant acrylic epoxy powder coating; phosphite antioxidant acrylic epoxy powder coating; acid cured epoxy powder coating; surface modifier polyacrylate powder coating
- IT Antioxidants  
(acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT Coating materials  
(powder; acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT 54942-97-1P, Butyl methacrylate-glycidyl methacrylate-isobutyl methacrylatemethyl methacrylate-styrene copolymer  
55567-80-1P, Butyl methacrylate-glycidyl methacrylatemethyl methacrylate-styrene copolymer 63266-53-5P, Glycidyl methacrylate-isobutyl methacrylatemethyl methacrylate-styrene copolymer 190957-35-8P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT 128-37-0, uses 2082-79-3, n-Octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate 2752-19-4, Tris(2-phenylphenyl)phosphite 4235-89-6 6683-19-8 13468-92-3,  
Tris(2-tert-butyl-5-methylphenyl)phosphite 21177-86-6,  
Tris(2-tert-butyl-4-methylphenyl)phosphite 25963-45-5 73754-27-5 90498-90-1  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT 26634-89-9, Butyl methacrylate-methyl methacrylate-styrene copolymer  
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
(blocking inhibitor; acid-epoxy curing type powder coating for a coated film having excellent yellow resistance and appearance)
- IT 62300-19-0P 71206-55-8P, Decanedicarboxylic acid-glycidyl methacrylate-isobutyl methacrylatemethyl methacrylate-styrene copolymer 190957-37-0P 190957-39-2P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinked powder clear coating with good appearance)

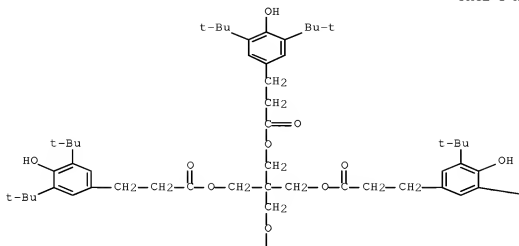
IT 26353-42-4, Butyl acrylate-ethyl acrylate copolymer  
 RL: PRP (Properties); TEM (Technical or engineered material use);  
 USES (Uses)  
 (surface modifier; acid-epoxy curing type  
 powder coating for a coated film having excellent yellow  
 resistance and appearance)  
 OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS  
 RECORD (8 CITINGS)

L39 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1995:967248 HCAPLUS Full-text  
 DOCUMENT NUMBER: 123:342304  
 ORIGINAL REFERENCE NO.: 123:61435a,61438a  
 TITLE: Mixing additives with  
 polyester-polyethers  
 INVENTOR(S): Ukielski, Ryszard  
 PATENT ASSIGNEE(S): Politechnika Szczecinska, Pol.  
 SOURCE: Pol., 3 pp.  
 CODEN: POXXA7  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Polish  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PL 161541	B1	19930730	PL 1989-282902	198912 19
PRIORITY APPLN. INFO.:			PL 1989-282902	198912 19

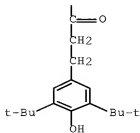
AB The distribution of additives such as fillers, reinforcing agents,  
 fireproofing agents, pigments, and dyes is improved in polyester-polyethers  
 such as block polyoxytetramethylene terephthalate-butylene terephthalate  
 copolymer containing 1-70% polyether blocks by 1st mixing granules of these  
 polymers with 0.1-25% polyethers and(or) aliphatic polyesters with mol. weight  
 200-6000 and optionally 0.1-20% additives for manufacture of fibers.  
 IT 6683-19-8, Irganox 1010  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (mixing additives with polyester-polyethers)  
 RN 6683-19-8 HCAPLUS  
 CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-  
 oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

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IC ICM C08J003-20  
 ICS C08K009-04; C08L067-02  
 CC 37-6 (Plastics Manufacture and Processing)

- Section cross-reference(s): 40
- ST mixing additive polyoxytetramethylene polyester; dye  
 mixing polyoxytetramethylene polyester; pigment  
 mixing polyoxytetramethylene polyester; fireproofing agent  
 mixing polyoxytetramethylene polyester; reinforcing agent  
 mixing polyoxytetramethylene polyester; filler  
 mixing polyoxytetramethylene polyester; butylene  
 polyterephthalate mixing additive; aliph polyester  
 dispersant additive polyoxytetramethylene polyester; polyether  
 dispersant additive polyoxytetramethylene polyester
- IT Polyethers, uses  
 Polyoxyalkylenes, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dispersants; mixing additives with  
 polyester-polyethers)
- IT Dyes  
 Fireproofing agents  
 Pigments  
 (mixing additives with polyester-polyethers)
- IT Glass fibers, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (mixing additives with polyester-polyethers)
- IT Dispersing agents  
 (polyethers and aliphatic polyesters; mixing additives  
 with polyester-polyethers)
- IT Polyesters, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (aliphatic, dispersants; mixing additives with  
 polyester-polyethers)
- IT Paraffin waxes and Hydrocarbon waxes, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (chloro, mixing additives with polyester-polyethers)
- IT Polyoxyalkylenes, uses  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
 formulation); PROC (Process); USES (Uses)  
 (polyester-, block, mixing additives with  
 polyester-polyethers)
- IT Polyesters, uses  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
 formulation); PROC (Process); USES (Uses)  
 (polyoxyalkylene-, block, mixing additives with  
 polyester-polyethers)
- IT 25322-69-4, Polypropylene glycol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (Rokopol D-7P, dispersant; mixing additives with  
 polyester-polyethers)
- IT 25190-06-1, Polytetramethylene glycol  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (dispersant; mixing additives with  
 polyester-polyethers)
- IT 1309-64-4, Antimony trioxide, uses 6683-19-8, Irganox  
 1010  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (mixing additives with polyester-polyethers)
- IT 106159-00-6, 1,4-Butanediol-polytetramethylene glycol-terephthalic  
 acid block copolymer  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
 formulation); PROC (Process); USES (Uses)  
 (mixing additives with polyester-polyethers)

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L39 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1995:958206 HCAPLUS Full-text  
 DOCUMENT NUMBER: 123:342245  
 ORIGINAL REFERENCE NO.: 123:61427a,61430a  
 TITLE: Manufacture of colored or additive-containing granules from thermoplastic polymers  
 INVENTOR(S): Aslan, Vintila; Nerva, Traian Mihai; Aslan, Romanita Stela; Parlog, Mihai  
 PATENT ASSIGNEE(S): Centrala Industriala Mase Plastice, Bucuresti, Rom.  
 SOURCE: Rom., 4 pp.  
 CODEN: RUXXA3  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Romanian  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

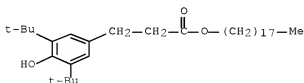
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RO 104194	B1	19940720	RO 1989-138770	19890320
PRIORITY APPLN. INFO.:				19890320
				RO 1989-138770

AB Title granules with high strength for molding are manufactured by mixing 95-99.5 parts semicryst. thermoplastic polymers with 0.01-5 parts polymers having m.p.  $\geq 10^\circ$  lower than the 1st polymers or 0.01-10 parts concs. containing additives or pigments dispersed in polymers having m.p.  $9-150^\circ$  so that the lower-melting polymers or the concs. are melted and deposited on the surface of the 1st polymers maintained in the solid state and cooling. Thus, granules of isotactic polypropylene m.p.  $160-170^\circ$  are mixed 5-10 min at  $110^\circ$  with 0.5 parts concentrate containing 30% Cu phthalocyanine blue and 70% polyethylene with mol. weight 1000 and m.p.  $95^\circ$  and the mixture is cooled while stirring.

IT 2082-79-3, Irganox 1076  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (manufacture of colored or additive-containing granules from thermoplastic polymers for molding)

RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)



IC ICM C08J003-12  
 ICS C08J003-20  
 CC 37-6 (Plastics Manufacture and Processing)  
 ST thermoplastic polymer granule colored;

polyethylene granule copper phthalocyanine blue pigmented; isotactic polypropylene granule phthalocyanine blue pigmented; additive contg thermoplastic polymer granule

IT Mixing Pigments  
(manufacture of colored or additive-containing granules from thermoplastic polymers for molding)

IT Carbon black, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(manufacture of colored or additive-containing granules from thermoplastic polymers for molding)

IT Polycarbonates, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(manufacture of colored or additive-containing granules from thermoplastic polymers for molding)

IT Polymers, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(manufacture of colored or additive-containing granules from thermoplastic polymers for molding)

IT 147-14-8, Copper phthalocyanine blue 2082-79-3, Irganox 1076 7429-90-5, Aluminum, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(manufacture of colored or additive-containing granules from thermoplastic polymers for molding)

IT 9002-88-4, Polyethylene 9002-88-4D, Polyethylene, oxidized 25038-54-4, Nylon 6, uses 25085-53-4, Isotactic polypropylene  
RL: POF (Polymer in formulation); USES (Uses)  
(manufacture of colored or additive-containing granules from thermoplastic polymers for molding)

L39 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:410901 HCAPLUS Full-text

DOCUMENT NUMBER: 121:10901

ORIGINAL REFERENCE NO.: 121:2253a,2256a

TITLE: Process for obtaining granular forms of additives for organic polymers

INVENTOR(S): Neri, Carlo; Pallini, Luciano

PATENT ASSIGNEE(S): Enichem Synthesis S.p.A., Italy

SOURCE: Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 565184	A1	19931013	EP 1993-200971	19930401
EP 565184	B1	19980617		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
AT 167500	T	19980715	AT 1993-200971	19930401
ES 2117090	T3	19980801	ES 1993-200971	

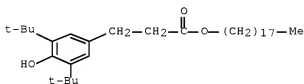
					199304 01
CA 2093380	A1	19931007	CA 1993-2093380		199304 05
CA 2093380	C	20030930			
AU 9336746	A	19931014	AU 1993-36746		199304 05
AU 653680	B2	19941006			
JP 06091152	A	19940405	JP 1993-103536		199304 06
JP 4125384	B2	20080730			
KR 9700145	B1	19970104	KR 1993-5669		199304 06
PRIORITY APPLN. INFO.:		IT 1992-MI827	A		199204 06

AB The process, useful for preparation of antioxidants, (in)organic antiacids, and/or light stabilizers for polymers, is carried out by extruding  $\geq 2$  additives at between the temperature of the lowest m.p. of the additive and  $140^{\circ}$ . Extruding a mixture of 134 g Anox PP 18 [octadecyl-3(3',5'-di-tert-4'-hydroxyphenyl)propionate] and 66 g Ca stearate at  $49-50^{\circ}$  gave pellets without powders.

IT 2082-79-3, Irganox 1076 6683-19-8, Anox 20  
 RL: USES (Uses)  
 (additives containing, granulars, preparation of, for polymers)

RN 2082-79-3 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester (CA INDEX NAME)

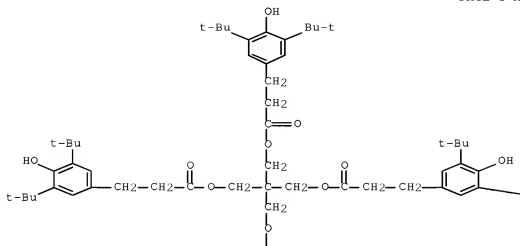


RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy)methyl]-1,3-propanediyl] ester (CA INDEX NAME)

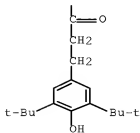


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Section cross-reference(s): 38

IT Antioxidants  
Light stabilizers  
(additives containing, granulars, preparation of, for polymers)

IT Extrusion  
(of additive granulars, for polymers)

IT 25085-53-4, Moplen FLF 20  
RL: USES (Uses)  
(additive granulars for, preparation of)

IT 557-05-1, Zinc stearate 1592-23-0, Calcium stearate 1843-05-6,  
Chimassorb 81 2082-79-3, Irganox 1076 3896-11-5,  
Tinuvin 326 6683-19-8, Anox 20 12304-65-3,  
Hydrotalcite 31570-04-4, Alkanox 240 52829-07-9, Tinuvin 770  
70198-29-7, Tinuvin 622  
RL: USES (Uses)  
(additives containing, granulars, preparation of, for polymers)

OS.CITING REF COUNT: 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

L39 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2009 ACS ON STN

ACCESSION NUMBER: 1993:672558 HCAPLUS Full-text

DOCUMENT NUMBER: 119:272558

ORIGINAL REFERENCE NO.: 119:48789a,48792a

TITLE: Method for the preparation of polymer additive compositions as dry, water-dispersible, free-flowing powders

INVENTOR(S): Hitch, Brenda Jo; Sharma, Mahendra Kumar; Voegtli, Leo Paul

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: PCT Int. Appl., 50 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9307209	A1	19930415	WO 1992-US8118	19920924
W: AU, BR, CA, HU, JP, KR, RU RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
US 5358560	A	19941025	US 1991-771908	19911004
AU 9226719	A	19930503	AU 1992-26719	19920924
AU 666131	B2	19960201		
EP 606344	A1	19940720	EP 1992-920825	19920924
EP 606344	B1	19960103		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				

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HU 68519	A2	19950628	HU 1994-951	
				199209 24
JP 07506598	T	19950720	JP 1992-506952	
				199209 24
BR 9206592	A	19951010	BR 1992-6592	
				199209 24
AT 132518	T	19960115	AT 1992-920825	
				199209 24
ES 2081630	T3	19960301	ES 1992-920825	
				199209 24
CA 2120018	C	19971223	CA 1992-2120018	
				199209 24
CN 1072695	A	19930602	CN 1992-112075	
				199210 03
PRIORITY APPLN. INFO.:			US 1991-771908	A
				199110 04
			WO 1992-US8118	A
				199209 24

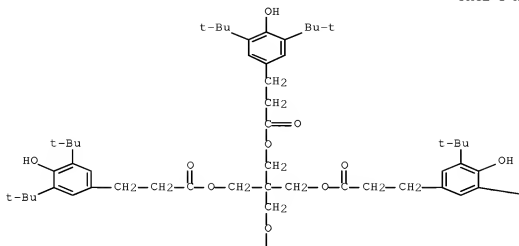
AB The title compns., forming aqueous dispersions for application to polymer particles, contain 5-99% additive (antioxidant, heat stabilizer, colorant, etc.), ≤95% tackifier which is nontacky at ≤50°, and 0.2-20% surfactant having HLB value ≥4. A powder was prepared by milling a mixt. of Irganox 1010 9.98, Epolene E-14 (emulsifiable polyethylene wax as tackifier) 1.49, Arlacel 80 0.097, and Igepal CO-130 0.049 g.

IT 6683-19-8, Irganox 1010  
RL: USES (Uses)  
(antioxidant, powder containing, for dispersion in water and addition to polymer particles)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

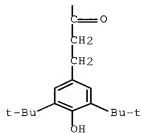
PAGE 1-A



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PAGE 2-A



IC ICM C08K009-00  
 ICS C08J003-20  
 CC 37-6 (Plastics Manufacture and Processing)

ST antioxidant powder dispersion addn polymer;  
powder polymer additive dispersant  
mixt; tackifier polymer additive  
mixt powder

IT Polymers, miscellaneous  
RL: MSC (Miscellaneous)  
(particles, aqueous dispersions of additive-containing powders  
for addition to)

IT Surfactants  
Tackifiers  
(powder containing polymer additive  
and, water-dispersible)

IT Antioxidants  
Lubricants  
(powder containing, for dispersion in water and addition to  
polymer particles)

IT Dispersing agents  
(powders containing polymer additives  
and, for addition to polymer particles)

IT Powders  
(free-flowing, polymer additive-containing, for  
dispersion in water and addition to polymer particles)

IT 123-28-4, Dilauryl thiodipropionate 693-36-7, Distearyl  
thiodipropionate 1709-70-2, Ethanox 330 2082-79-3, Irganox 1076  
6683-19-8, Irganox 1010 31570-04-4, Irgafos 168  
89421-57-8, Irganox B 225 122965-04-2, Irganox B 501W  
RL: USES (Uses)  
(antioxidant, powder containing, for dispersion in water  
and addition to polymer particles)

IT 1592-23-0, Calcium stearate  
RL: USES (Uses)  
(lubricant, powder containing, for dispersion in water and  
addition to polymer particles)

IT 11097-59-9, DHT 4A  
RL: USES (Uses)  
(powder containing, for dispersion in water and addition to  
polymer particles)

IT 1338-43-8, Arlacel 80 9005-65-6, Tween 80 9016-45-9, Igepal CO  
210  
RL: USES (Uses)  
(surfactant, powder containing polymer  
additive and, water-dispersible)

IT 12634-23-0, Epolene E 14  
RL: USES (Uses)  
(tackifier, powder containing polymer  
additive and, water-dispersible)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS  
RECORD (3 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L39 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1993:518619 HCAPLUS Full-text  
DOCUMENT NUMBER: 119:118619  
ORIGINAL REFERENCE NO.: 119:21353a,21356a  
TITLE: Process for granulating  
powdery additives for organic  
polymers  
INVENTOR(S): Neri, Carlo; Pallini, Luciano

July 26, 2009

10/586,707

70

PATENT ASSIGNEE(S): Enichem Synthesis S.p.A., Italy; Great Lakes  
 Chemical (Europe) GmbH  
 SOURCE: Eur. Pat. Appl., 9 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 514784	A1	19921125	EP 1992-108230	19920515
EP 514784	B1	20010816		
EP 514784	B2	20051005		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, PT, SE				
US 5240642	A	19930831	US 1992-883213	19920514
CA 2068840	A1	19921118	CA 1992-2068840	19920515
AT 204314	T	20010915	AT 1992-108230	19920515
JP 05179056	A	19930720	JP 1992-124589	19920518
US 5844042	A	19981201	US 1997-937899	19970925
PRIORITY APPLN. INFO.:			IT 1991-MI1354	A 19910517
			US 1993-43349	B1 19930406

AB Homogeneous granulated (in)organic additives for neutralization of acid (catalyst) residues in organic polymers, especially polyolefins, are obtained by granulating conventional powdery material, e.g., a metal stearate, carbonate, etc., in the presence of  $\geq 1\%$  antioxidant tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionyloxymethyl]methane (I) in the molten state. Granulated additives do not develop harmful dust in the air, they do not agglomerate inside the feed hoppers, and their performance is comparable to powdery materials. Thus, a homogenized 1:1 mixture of Anox 20 (a crystalline com. I) and Ca stearate powders was extruded at  $115^\circ$  to give a strand which was cut to .apprx.2.5-mm granules. Extruded and re-extruded samples of a com. polypropylene containing 0.2% of the above granules had yellowing index -2.6, -1.3, and 0.3, and melt flow index 20.6, 28.8, and 36.0 after 1st, 3d, and 5th extrusion, vs. -2.5, -0.8, and 0.7, and 20.7, 29.0, and 36.0 for the same polymer blended with the same amts. of powdery stabilizers.

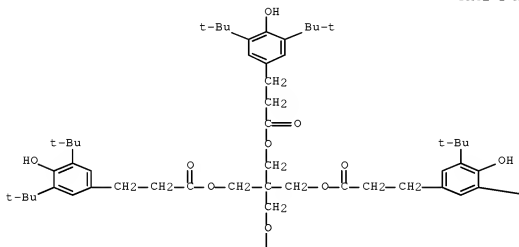
IT 6683-19-SF, Anox 20AM  
 RL: PREP (Preparation)  
 (stabilizers for polymers containing acid neutralization

additives and, granulated, manufacture of)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

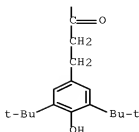
PAGE 1-A



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PAGE 2-A



IC ICM C08K005-13  
ICS C08J003-22

CC 37-6 (Plastics Manufacture and Processing)

ST polymer acid stabilizer granulation antioxidant;  
granulation melt antioxidant calcium stearate; melt  
antioxidant blending acid stabilizer; polypropylene stabilization  
antioxidant stearate granulate

IT Polymers, miscellaneous  
RL: MSC (Miscellaneous)  
(acid neutralization additive and antioxidant  
blends for, manufacture of granulated)

IT Stabilizing agents  
(for polymers, granulated antioxidant and  
acid neutralization additive blends as)

IT Oxides, uses  
RL: USES (Uses)  
(stabilizers for polymers containing antioxidants and,  
granulated, manufacture of)

IT Alkenes, polymers  
RL: USES (Uses)  
(polymers, acid neutralization additive and  
antioxidant blends for, manufacture of granulated)

IT 25085-53-4, Moplen FLF20  
RL: USES (Uses)  
(acid neutralization additive and antioxidant blends  
for, manufacture of granulated)

IT 6683-19-8P, Anox 20AM  
RL: PREP (Preparation)  
(stabilizers for polymers containing acid neutralization  
additives and, granulated, manufacture of)

IT 57-11-4DP, Stearic acid, metal salts 463-79-6DP, Carbonic acid,  
metal salts 557-05-1P, Zinc stearate 1314-13-2P, Zinc oxide,  
miscellaneous 1592-23-0P, Calcium stearate 12304-65-3P,  
Hydrotalcite  
RL: PREP (Preparation)  
(stabilizers for polymers containing antioxidants and,  
granulated, manufacture of)

OS.CITING REF COUNT: 20 THERE ARE 20 CAPLUS RECORDS THAT CITE THIS  
RECORD (27 CITINGS)

L39 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1992:60892 HCAPLUS Full-text  
DOCUMENT NUMBER: 116:60892  
ORIGINAL REFERENCE NO.: 116:10527a,10530a  
TITLE: Solid-form additive systems dispersible in  
aqueous media for addition to polymers



July 26, 2009

10/586,707

73

INVENTOR(S): Sharma, Mahendra Kumar  
 PATENT ASSIGNEE(S): Eastman Kodak Co., USA  
 SOURCE: PCT Int. Appl., 42 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9116372	A1	19911031	WO 1991-US2292	19910409
W: AU, BR, CA, HU, JP, KR, SU RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE US 5153029 A 19921006 US 1990-513389				
CA 2080836	A1	19911024	CA 1991-2080836	19900423
CA 2080836	C	19970805		19910409
AU 9177536	A	19911111	AU 1991-77536	19910409
AU 651110	B2	19940714		19910409
EP 526546	A1	19930210	EP 1991-908731	19910409
EP 526546	B1	19960717		19910409
BR 9106370	DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE	19930427	BR 1991-6370	19910409
HU 62317	A2	19930428	HU 1992-3199	19910409
JP 05507103	T	19931014	JP 1991-508313	19910409
AT 140467	T	19960815	AT 1991-908731	19910409
ES 2090329	T3	19961016	ES 1991-908731	19910409
CN 1055936	A	19911106	CN 1991-102570	19910423
US 5300256	A	19940405	US 1992-956532	19921005
US 6107383	A	20000822	US 1994-199863	19940222
PRIORITY APPLN. INFO.:			US 1990-513389	A 19900423

US 1989-392759	A2	198908 11
WO 1991-US2292	A	199104 09
US 1992-956532	A3	199210 05

AB The title systems are prepared by heating an additive (e.g., antioxidant) to form a melt phase, mixing the melt with surfactants having low and high HLB values, mixing with water to form a water-in-oil emulsion, and cooling to give a water-dispersible encapsulated solid material (particle size 5-1000  $\mu\text{m}$ ). A melt comprising Irganox 1076 50.0, Epolene E-14 (polyethylene) 10.0, and Ca stearate 15.9 g was prepared at 60-70°, mixed with 1.4 g Igepal CO-210 and 1.9 g Igepal CO-630, treated slowly with 15.0 g water, and cooled to give a dispersion of fine particles in water. The dispersion was resistant to phase separation for several weeks and was suitable for addition to polymer (e.g., polypropylene) particles to impart heat stability.

IT 6683-19-8

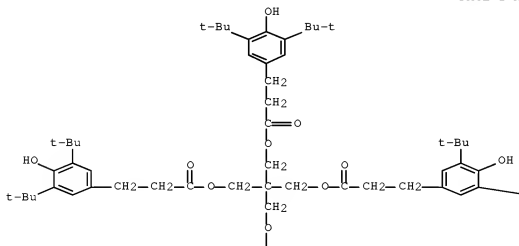
RL: USES (Uses)

(antioxidants, dispersions of, for addition to polymers)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

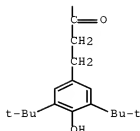
PAGE 1-A



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PAGE 2-A



- IC ICM C08J003-20  
ICS C08J003-22; C08K009-04; C08K005-00
- CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 46
- ST antioxidant dispersion addn polymer; emulsion  
additive addn polymer; dispersion additive  
addn polymer; polypropene antioxidant addn dispersion
- IT Quaternary ammonium compounds, uses  
RL: USES (Uses)  
(antistatic agents, dispersions of, for addition to polymers  
)
- IT Emulsifying agents  
(powdered polymer additives containing,  
for mixing with polymers)
- IT Antistatic agents  
Fireproofing agents  
Kieselguhr  
RL: USES (Uses)  
(powdered, dispersions of, for addition to polymers  
)
- IT Clays, uses  
RL: USES (Uses)  
(processing aids, dispersions of, for addition to polymers  
)
- IT Antioxidants  
(water-dispersible powders containing, for addition to

polymers)

IT Light stabilizers  
(UV, powdered, dispersions of, for addition to polymers)

IT 9003-07-0, Polypropylene  
RL: USES (Uses)  
(additives for, water-dispersible powders containing)

IT 85-60-9 693-36-7, Distearyl thiodipropionate 1709-70-2  
2082-79-3 3287-12-5, Dicityl thiodipropionate 3806-34-6  
6683-19-8 16545-54-3, Dimyristyl thiodipropionate  
26523-78-4, Tris(monononylphenyl) phosphite 26741-53-7  
27676-62-6 63123-11-5 86624-80-8 125559-66-2  
RL: USES (Uses)  
(antioxidants, dispersions of, for addition to polymers)

IT 128-37-0, miscellaneous  
RL: MSC (Miscellaneous)  
(antioxidants, dispersions of, for addition to polymers)

IT 138533-21-8 138533-22-9 138551-43-6  
RL: USES (Uses)  
(colorants, dispersions of, for addition to polymers)

IT 1338-43-8, Arlacel 80 9016-45-9, Igepal CO-630  
RL: USES (Uses)  
(emulsifiers, for antioxidants, for addition to polymers)

IT 14807-96-6, Talc, uses  
RL: USES (Uses)  
(fillers, dispersions of, for addition to polymers)

IT 1163-19-5, Decabromodiphenyl oxide 1309-64-4, Antimony trioxide,  
uses 13560-89-9 32588-76-4 52907-07-0  
RL: USES (Uses)  
(fireproofing agents, dispersions of, for addition to polymers)

IT 87-18-3, p-tert-Butylphenyl salicylate 1843-05-6,  
2-Hydroxy-4-octoxybenzophenone 2985-59-3 3896-11-5 4221-80-1  
25973-55-1 30947-30-9 33059-05-1 52829-07-9  
RL: USES (Uses)  
(light stabilizers, dispersions of, for addition to polymers)

IT 112-84-5, Erucamide 301-02-0, Oleamide 25322-68-3, Polyethylene  
glycol 31566-31-1, Glycerol monostearate  
RL: USES (Uses)  
(processing aids, dispersions of, for addition to polymers)

IT 6629-10-3 70331-94-1  
RL: USES (Uses)  
(stabilizers, dispersions of, for addition to polymers)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
RECORD (2 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L39 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1984:425101 HCAPLUS Full-text

DOCUMENT NUMBER: 101:25101

ORIGINAL REFERENCE NO.: 101:3975a,3978a

TITLE: Powdered olefin polymer  
coating materials

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59020362	A	19840202	JP 1982-129552	19820727
PRIORITY APPLN. INFO.:			JP 1982-129552	19820727

AB Powdered comps. containing an ethylene- $\alpha$ -olefin copolymer having d. 0.91-0.935, bulk 0.25-0.55 g/mL, and average particle size 70-250  $\mu$ , dibenzylidenesorbitol (I) [32647-67-9] or its derivative, and an antioxidant are useful as coatings with good luster, bond strength, and surface smoothness. Thus, 1-butene-ethylene copolymer [25087-34-7] 100, I 0.4, and pentaerythritol tetrakis(3,5-di-tert-butyl-4-hydroxyhydrocinnamate) [6683-19-8] 0.4 parts were mixed and pulverized. Luster, bond strength, and surface smoothness were good in coating stainless steel plate with the mixed powdered composition and heating the plate for 4 min at 350° and 3 min at 200°.

IT 6683-19-8

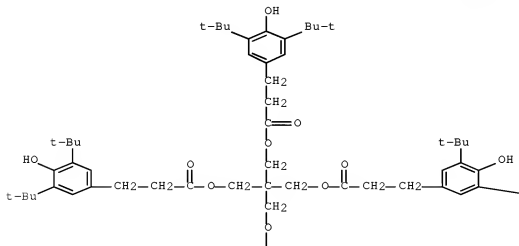
RL: USES (Uses)

(antioxidants, olefin powder coatings containing, for improved surface strength and luster)

RN 6683-19-8 HCAPLUS

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, 1,1'-[2,2-bis[[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropoxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)

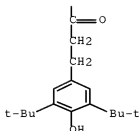
PAGE 1-A



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PAGE 2-A



IC C09D005-00; C08K005-05; C08L023-08; C09D003-733; C09D005-40  
 CC 42-10 (Coatings, Inks, and Related Products)  
 ST olefin polymer powd coating;  
 dibenzylidenesorbitol additive olefin polymer;  
 pentaerythritol tetrakisdiethylhydrocinnamate antioxidant;  
 antioxidant olefin polymer coating; butene ethylene  
 copolymer coating; luster olefin polymer coating;  
 surface strength olefin polymer coating  
 IT Coating materials  
 (powder, ethylene-butene copolymers containing  
 dibenzylidenesorbitol and phenolic antioxidant as, with improved  
 luster and surface strength)  
 IT 6683-19-8  
 RL: USES (Uses)  
 (antioxidants, olefin powder coatings containing, for  
 improved surface strength and luster)  
 IT 25087-34-7  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings, containing dibenzylidenesorbitol and phenolic  
 antioxidants, powdered)  
 IT 32647-67-9  
 RL: USES (Uses)  
 (olefin powder coatings containing, for improved luster)  
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
 RECORD (1 CITINGS)

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